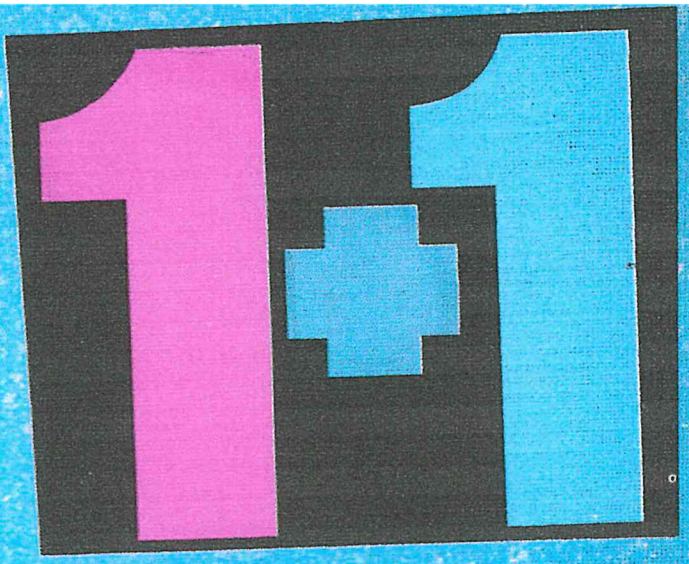
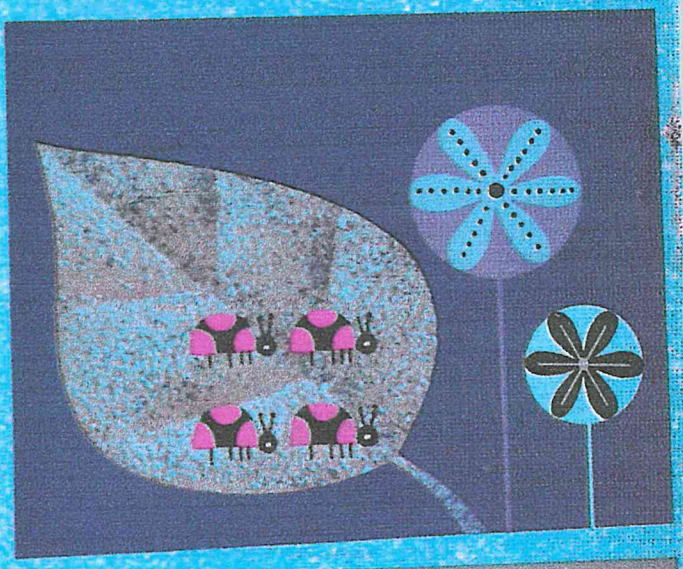
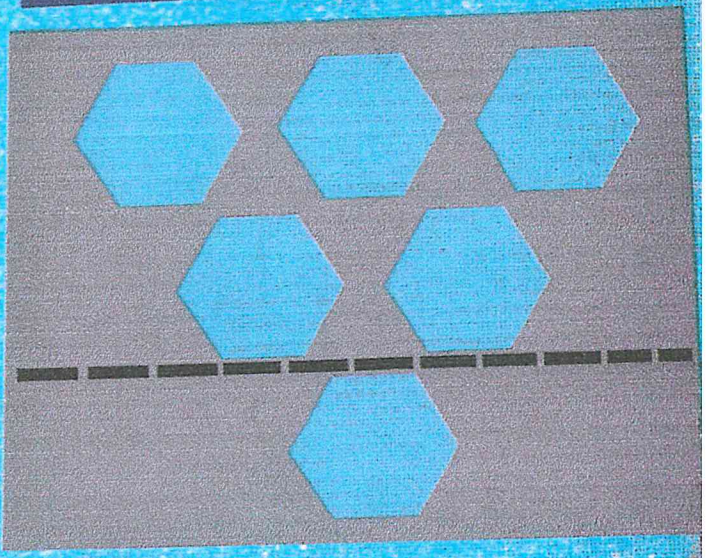
MEETING MATHEMATICS





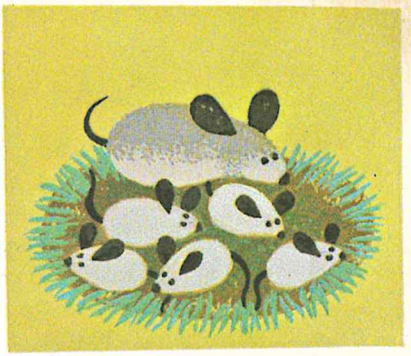


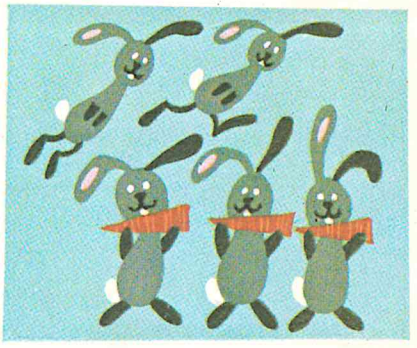
ABC MATHEMATICS

The Modern Mathematics Series

MEETING MATHEMATICS

Edwina Deans
Robert B. Kane
Robert A. Oesterle





AMERICAN BOOK COMPANY

Edwina Deans

Specialist in elementary mathematics education and Assistant Editor of *The Arithmetic Teacher;* previously Assistant Professor of Education at the University of Cincinnati, Elementary School Supervisor in Arlington County, Virginia, and an elementary school teacher.

Robert B. Kane

Associate Professor of Mathematics and Education and Coordinator of Student Teaching in Mathematics at Purdue University; previously a mathematics teacher with experience also in the mathematics of industry. Dr. Kane is a mathematics consultant to schools, active in in-service work with elementary school teachers, and has written numerous articles for professional journals.

Robert A. Oesterle

Associate Professor of Mathematics Education at Purdue University; previously Director of Student Teaching at Purdue University; teacher of mathematics at various grade levels; mathematics consultant; subject matter associate and reviewer of televised mathematics programs for elementary schools; and author of secondary school mathematics texts and articles for professional journals.

Text illustrations and cover art by JOHN MCMAHON *and* DENTON LUND

Copyright © 1963 by
AMERICAN BOOK COMPANY

New York Cincinnati Atlanta Dallas Millbrae

Philippines Copyright 1963 by
American Book Company

Deans, Kane, Oesterle: MEETING MATHEMATICS. Manufactured in the United States of America. All rights reserved. No part of this book protected by the copyright hereon may be reprinted in any form without written permission of the publisher.

5 7 9 11 13 15 EP 16 14 12 10 8 6 4

CONTENTS

Page

Chapter 1 — 1

Understanding numbers 1-5; exploring sets and subsets; 1-to-1 correspondence; ordinals; comparing sets (more and fewer); completing sets (how many more are needed); reading and writing numerals through 5; sequence; number words; combining and separating sets; pictured problems.

Chapter 2 — 13

Understanding numbers 2-6; numerals through 6; addition and subtractions facts for 2-6; meaning of addition and subtraction; commutative property; comparisons; number stories.

Chapter 3 — 28

Understanding numbers 3-7; recognizing and using subsets of 5; ordinals; reading number sentences; more and less; numerals through 7; sequence; before and after; addition and subtraction facts for 3-7; inverse operations; commutative property; problem solving (using number sentences).

Chapter 4 — 45

Understanding numbers 4-8; comparing numbers; numerals through 8; how many more are needed; addition and subtraction facts for 4-8; readiness for addition of 3 numbers; counting by 2's, 3's, 4's; multiplication and division facts for 2's-4's through 8; problem solving (originating number stories, writing number sentences); meaning and use of +, −, =; doubles; adding and subtracting 1.

Chapter 5 — 65

Understanding numbers 5-9; numerals through 9; number words six-nine; ordinals; missing numbers; inverse operations; commutative property; addition and subtraction facts for 5-9; multiplication and division facts for 2's-4's through 9; adding 3 numbers; measures; problem solving.

Chapter 6 84

Completing sets; reviewing addition and subtraction facts through 9; vertical form for addition and subtraction; doubles; money; comparing sets; understanding, reading, writing 10; hand symbols for 5 and 10; column addition; using 5; counting by 1's, 2's, 3's, 4's, 5's.

Chapter 7 103

Understanding tens to 100; reading and writing 10's to 100; "teen" numbers; 10's and 1's to 50; numerals 1-50; sequence to 50; before and after; number facts in problems; one half; one fourth; counting by 1's, 2's, 5's, 10's; time (hours); missing numbers.

Chapter 8 122

Understanding numbers to 100; 10's and 1's to 100; counting by 2's, 5's, 10's; addition and subtraction facts for 6-10; multiplication and division facts for 1's-5's through 10; comparing money; column addition involving money; doubles; adding and subtracting 1; odd and even numbers; numerals 1-100; sequence; before and after.

Chapter 9 140

Addition and subtraction facts for 11-18; doubles and near doubles; time (half hours); multiplication and division facts for 2's-9's through 18; problem solving.

End-Of-Year Tests 158

Practice Section 160

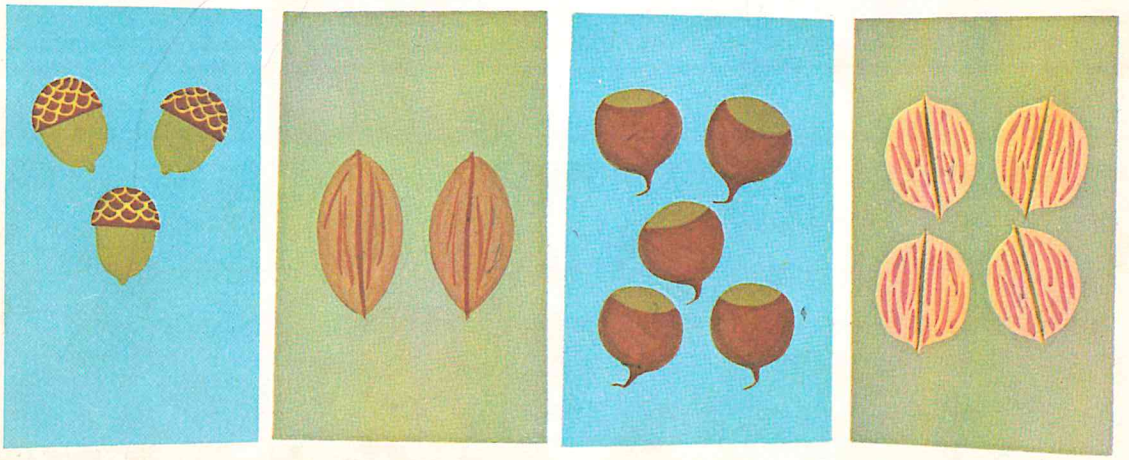
Index 171

TO THE TEACHER

MEETING MATHEMATICS is planned for guided, developmental work with children. Detailed analysis of each lesson is provided in the TEACHER'S EDITION which gives background for the teacher, introductory activities, a variety of ways to present difficult concepts, follow-up materials, and answers.

BUSHY AND HIS FAMILY

How many? How do you know?

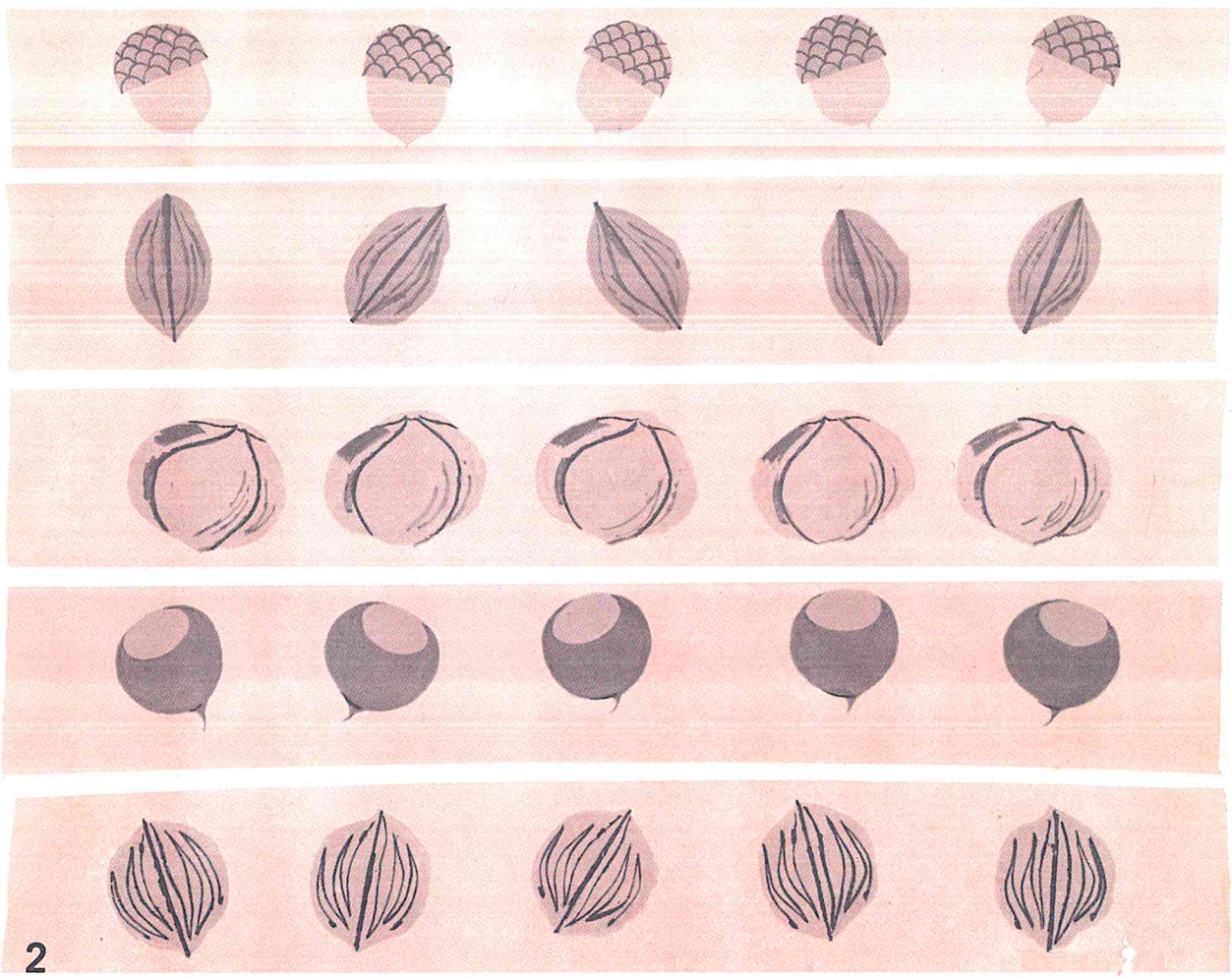


ONE FOR EACH

Which one is first?

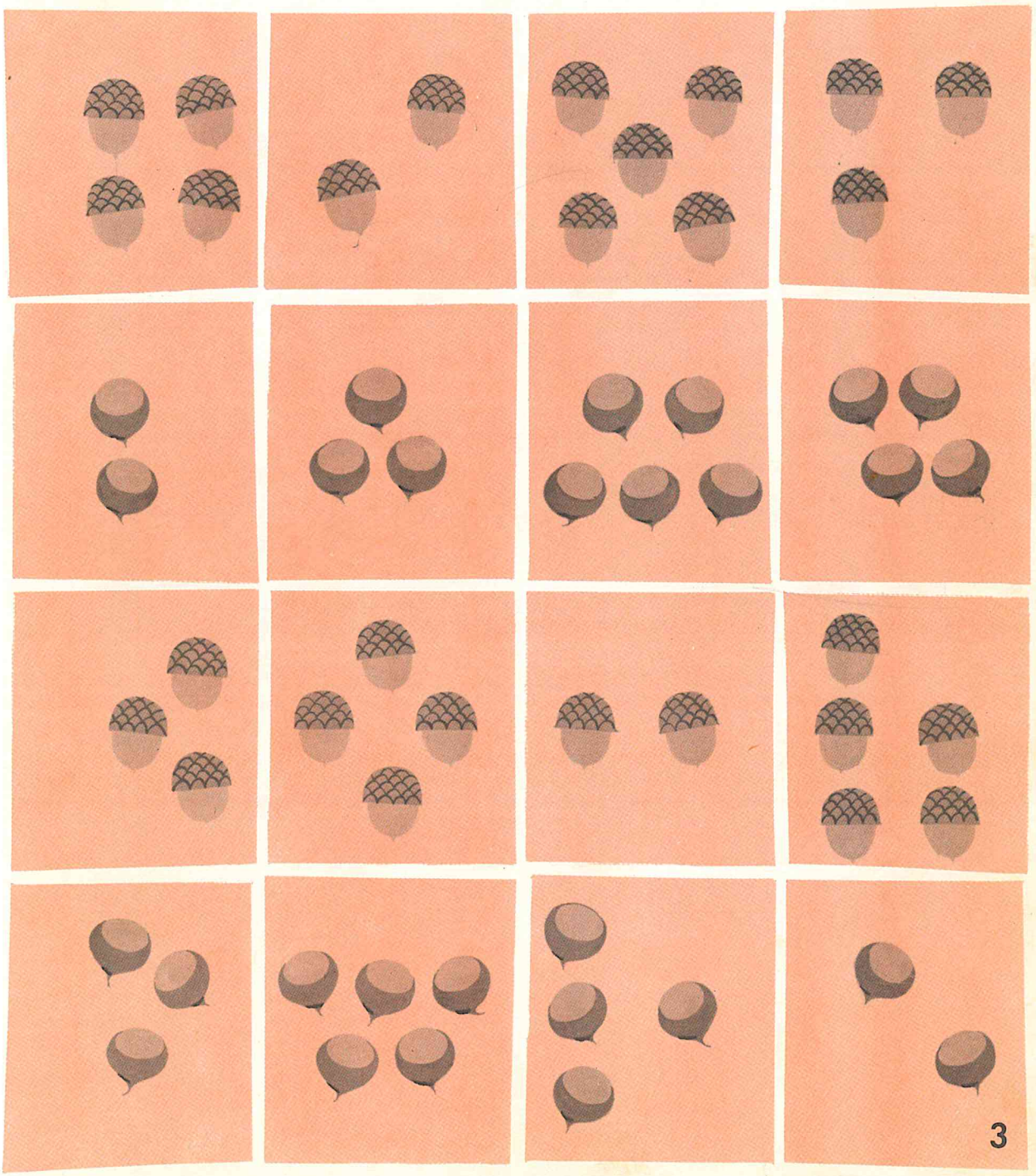
Which one is last?

Is there one for each?



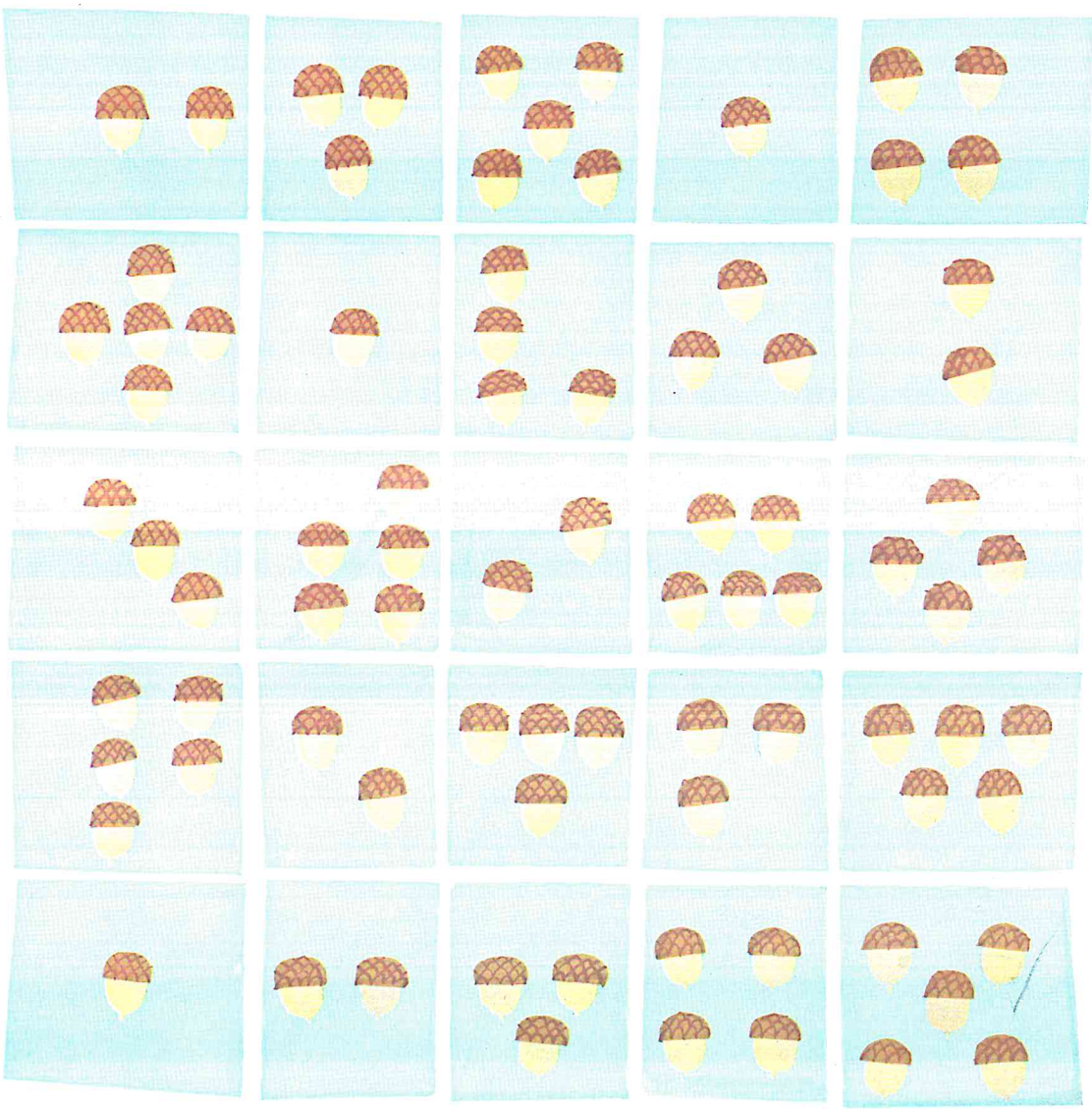
MORE AND FEWER

How many in each set? How do you know?



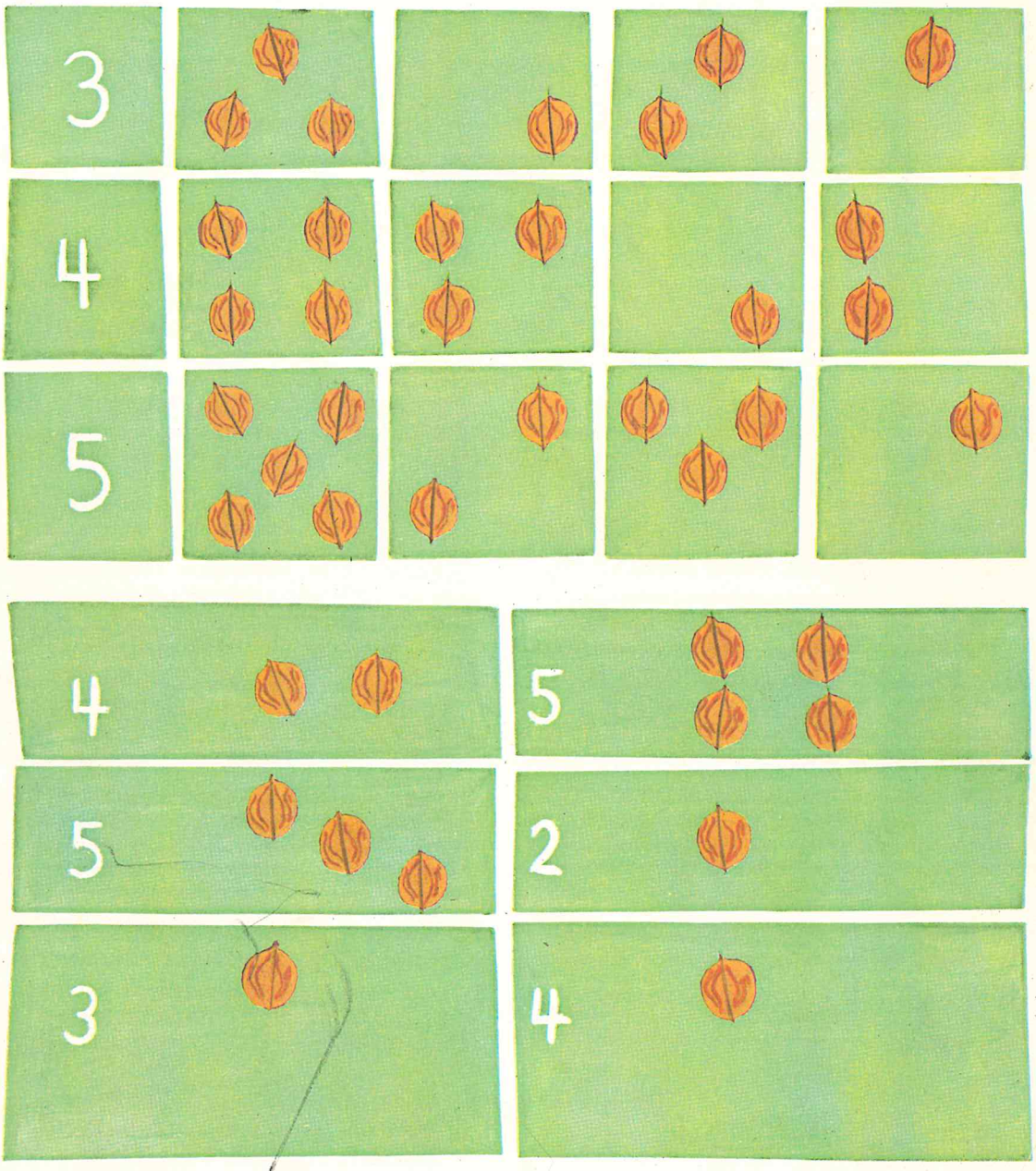
MATCHING NUMERALS AND SETS

How many in each set?

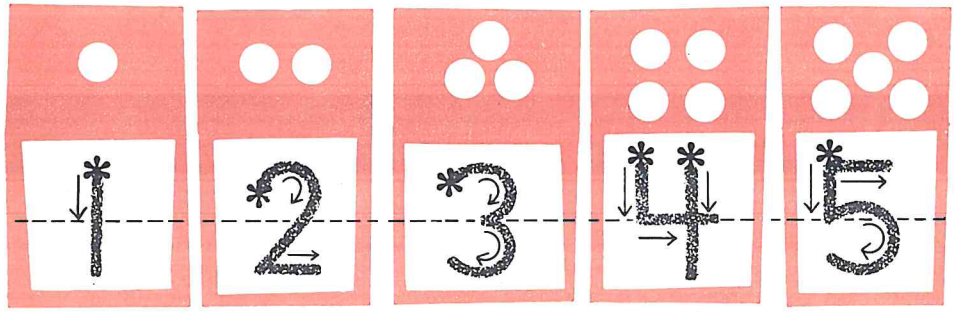


1 2 3 4 5

HOW MANY MORE DO YOU NEED?



READING AND WRITING NUMERALS

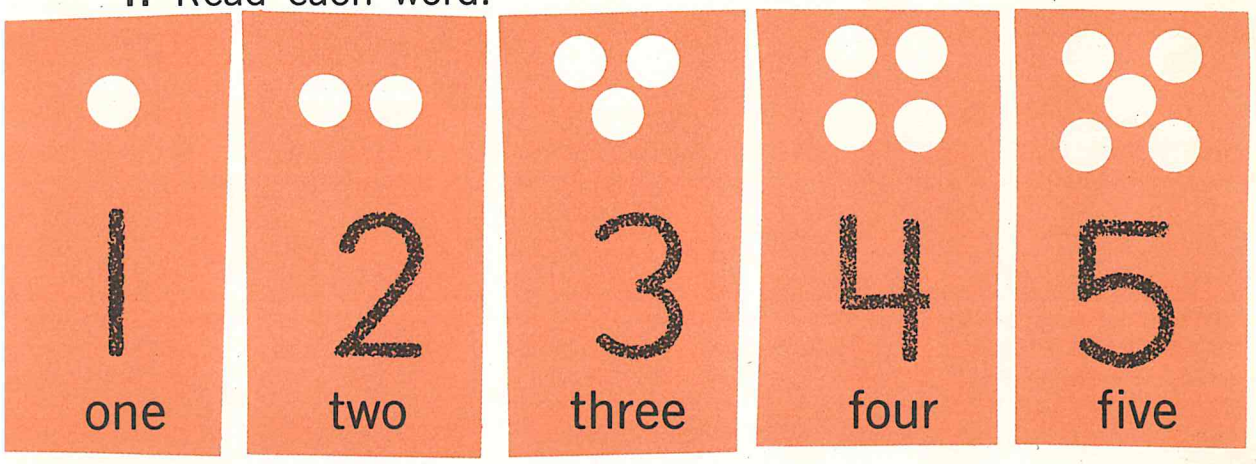


3		5
1		3
	4	5
1	2	

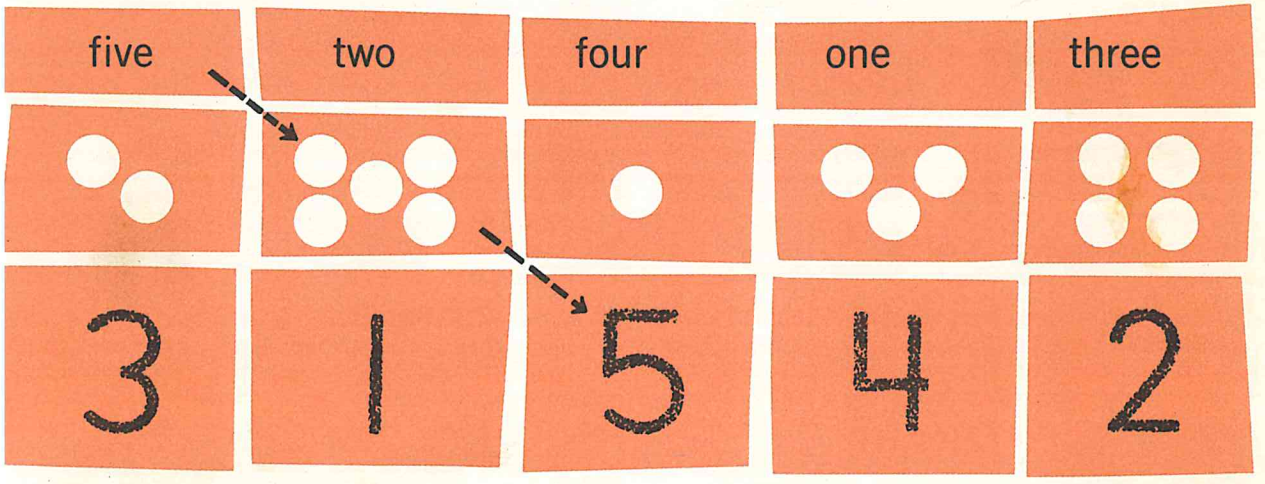
	3	4
3	4	
	2	3
2		4

READING NUMBER WORDS

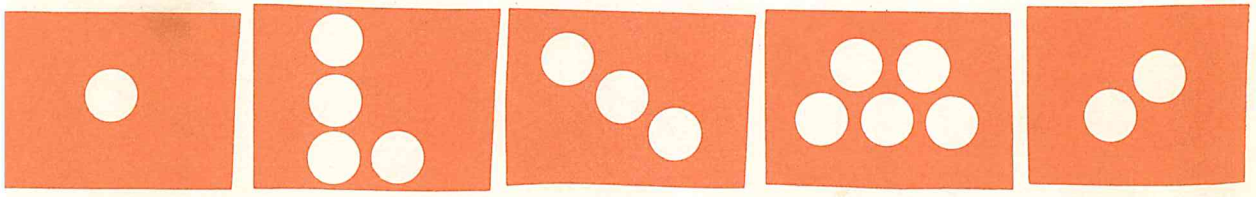
1. Read each word.



2. Match words, pictures, and numerals.

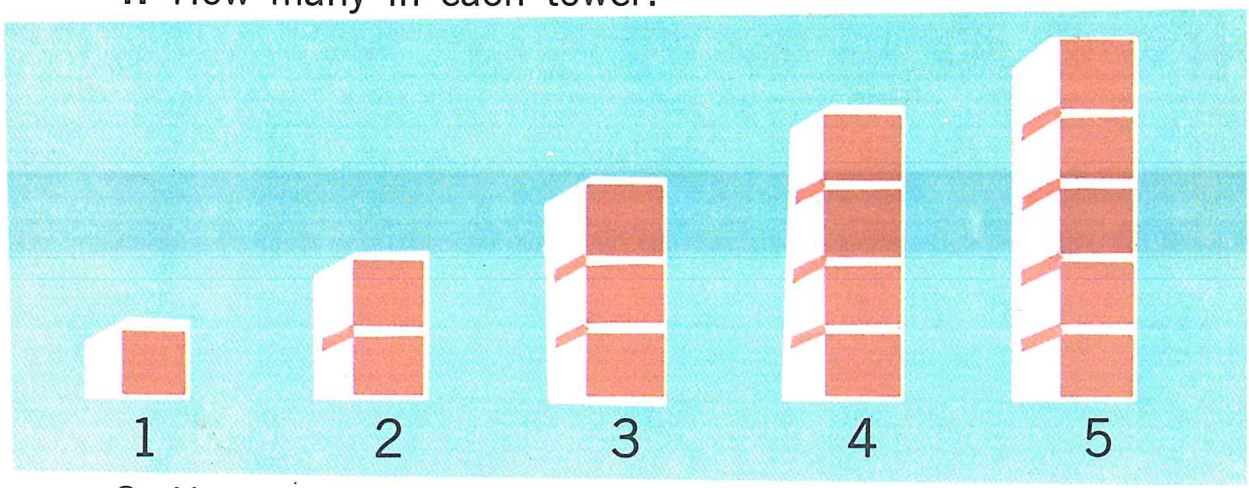


3. Write a numeral for each set.

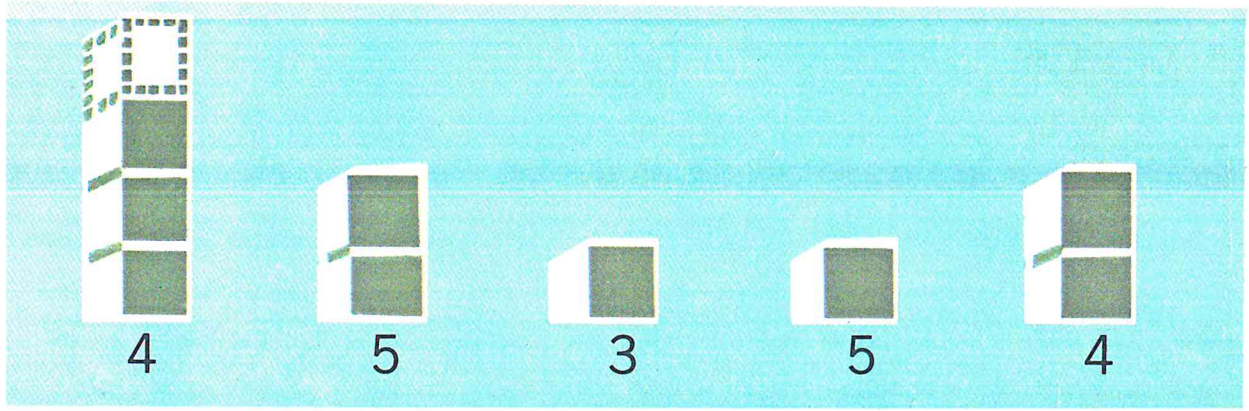


ONE THROUGH FIVE

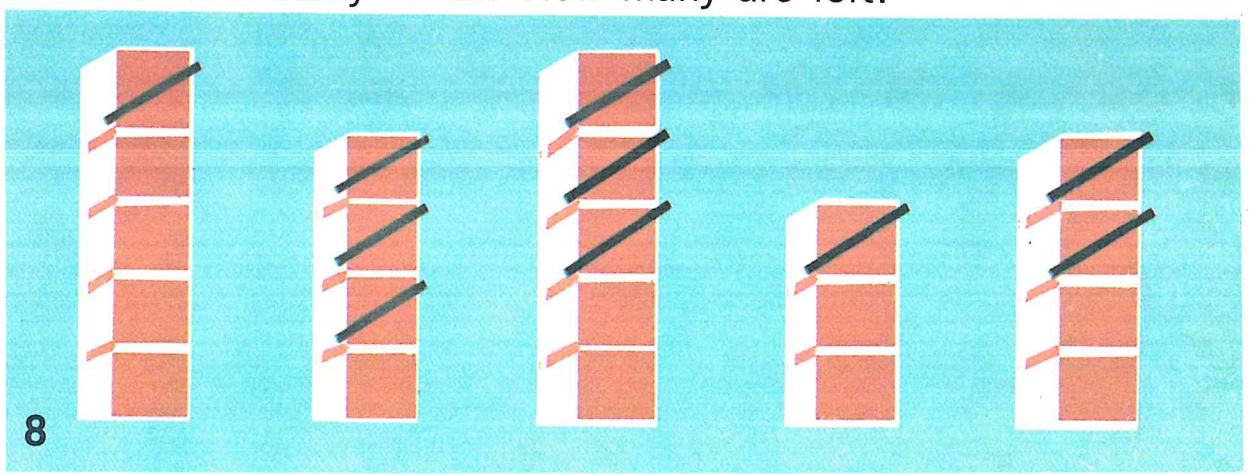
1. How many in each tower?



2. How many more do you need?

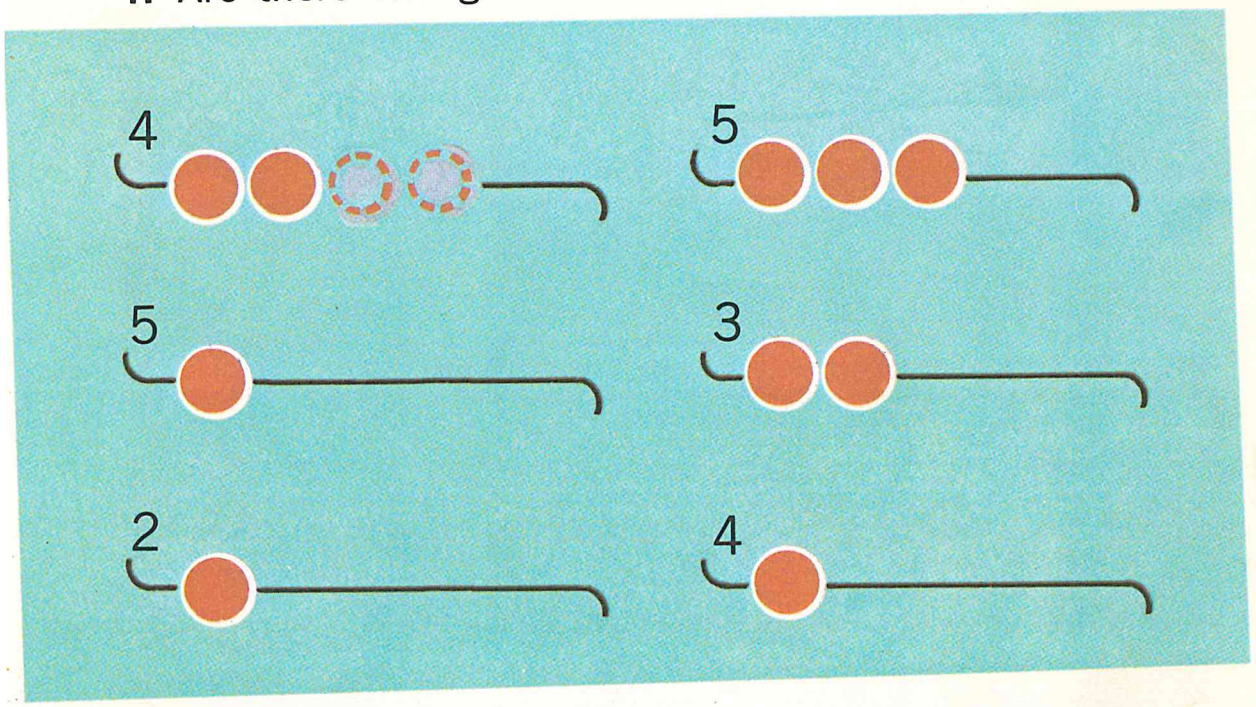


3. How many in all? How many are left?

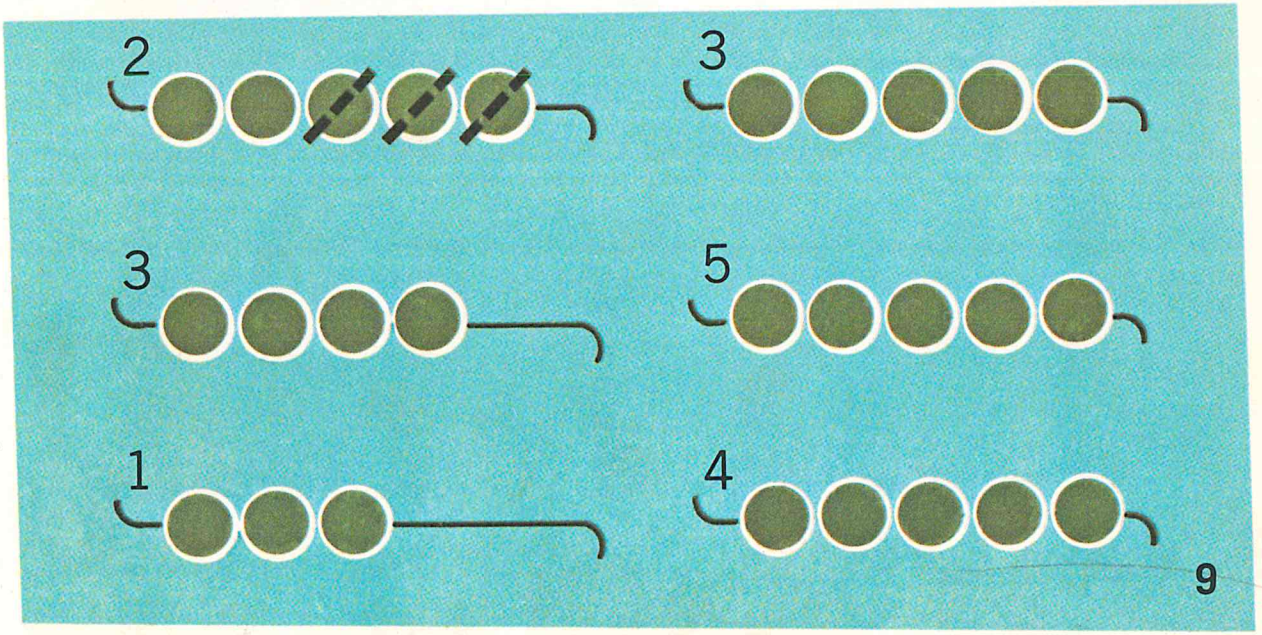


USING BEAD LINES

1. Are there enough beads?

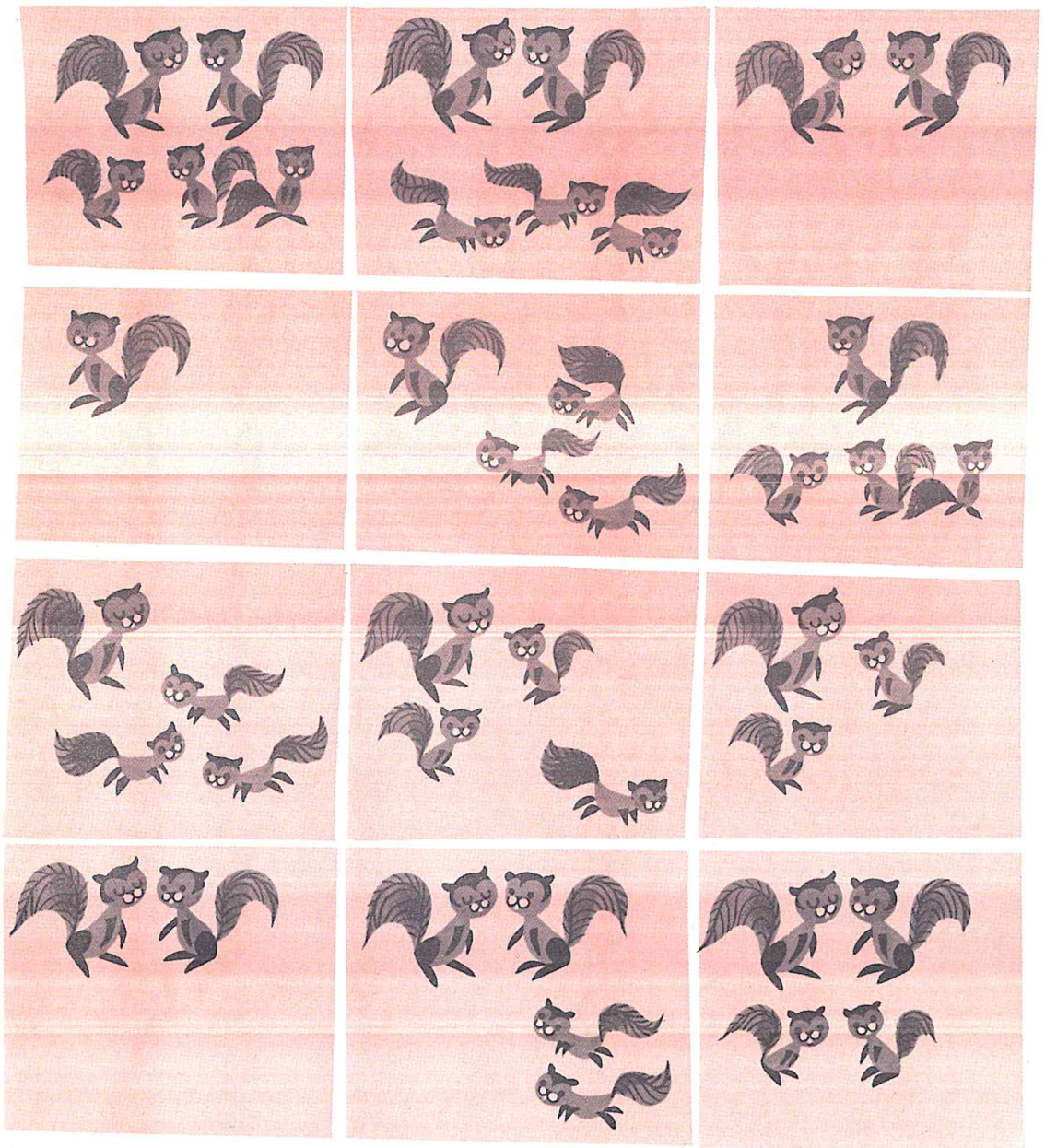


2. Are there too many beads?



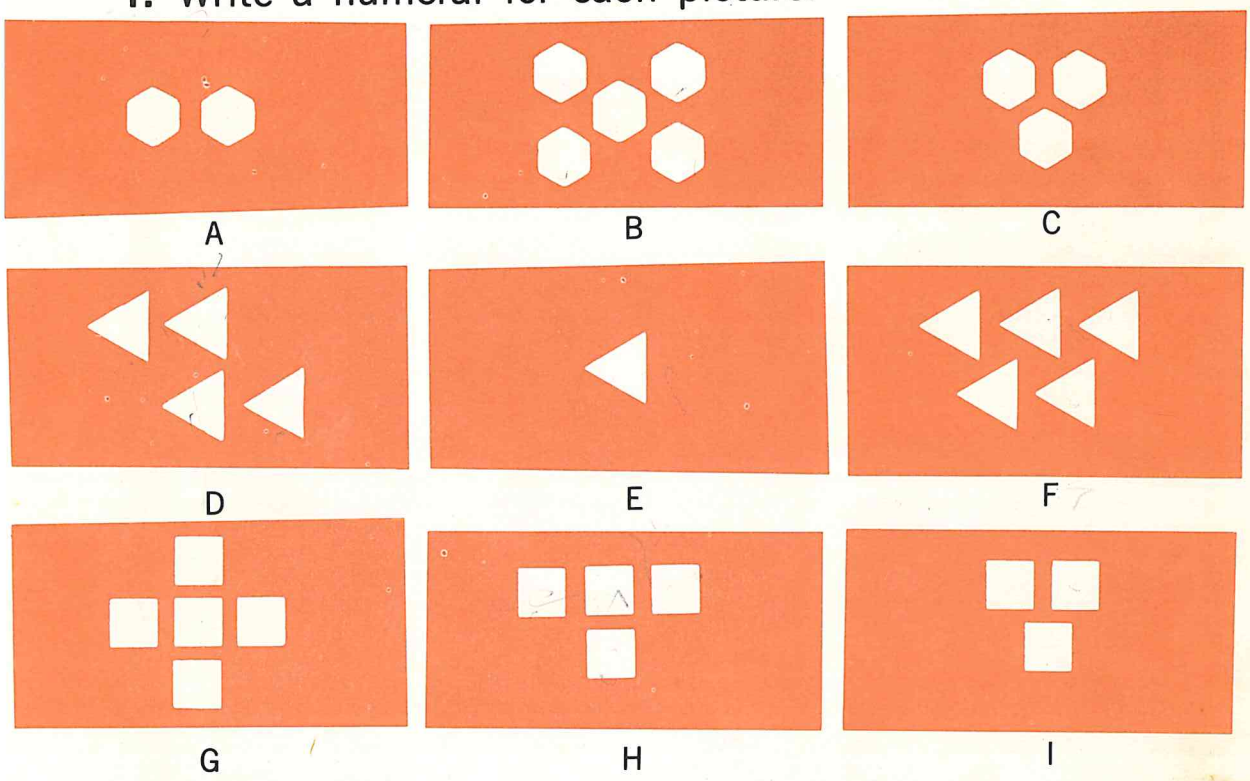
NUMBER STORIES

Tell a number story for each row.



PRACTICE

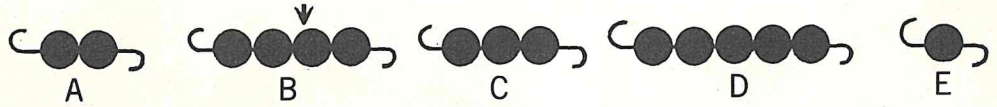
1. Write a numeral for each picture.



2. Match these words, numerals, and bead lines.

four one two five three

1 4 5 3 2

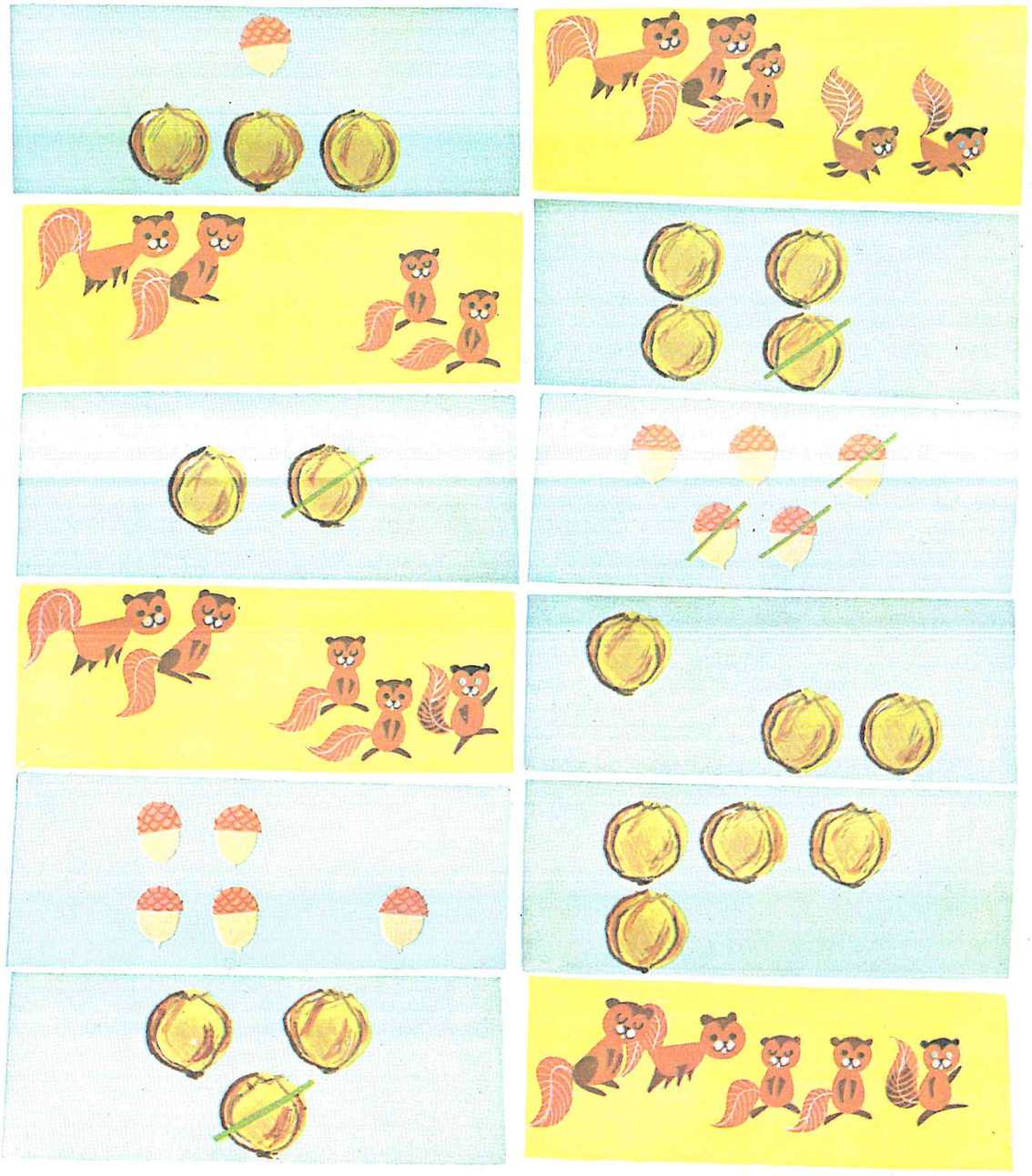


3. Write the numerals in order. Begin with 1.

4. Draw pictures for these numerals.

3 2 5 1 4

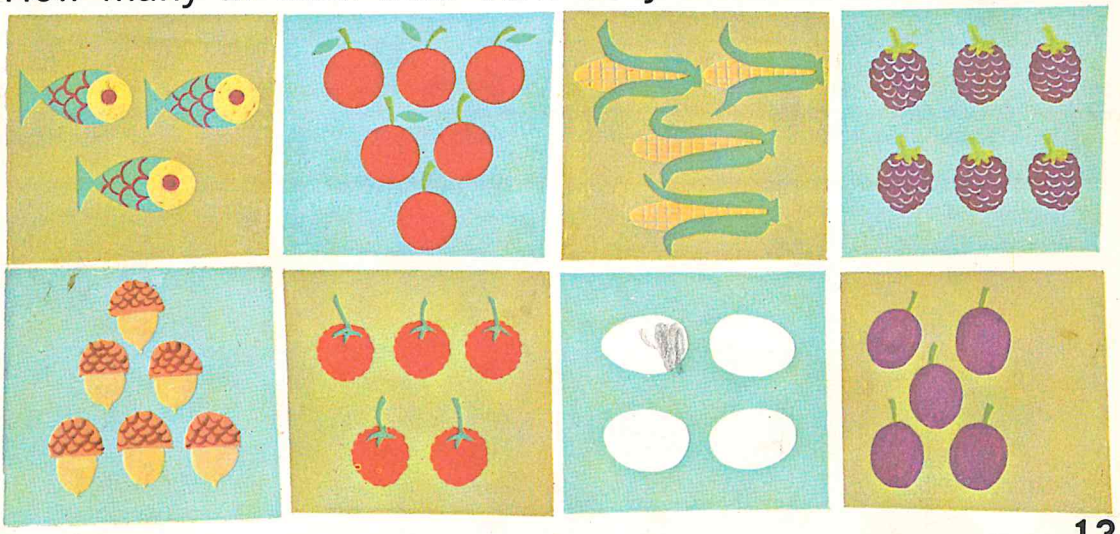
PROBLEM SOLVING



PATCH AND HER FAMILY

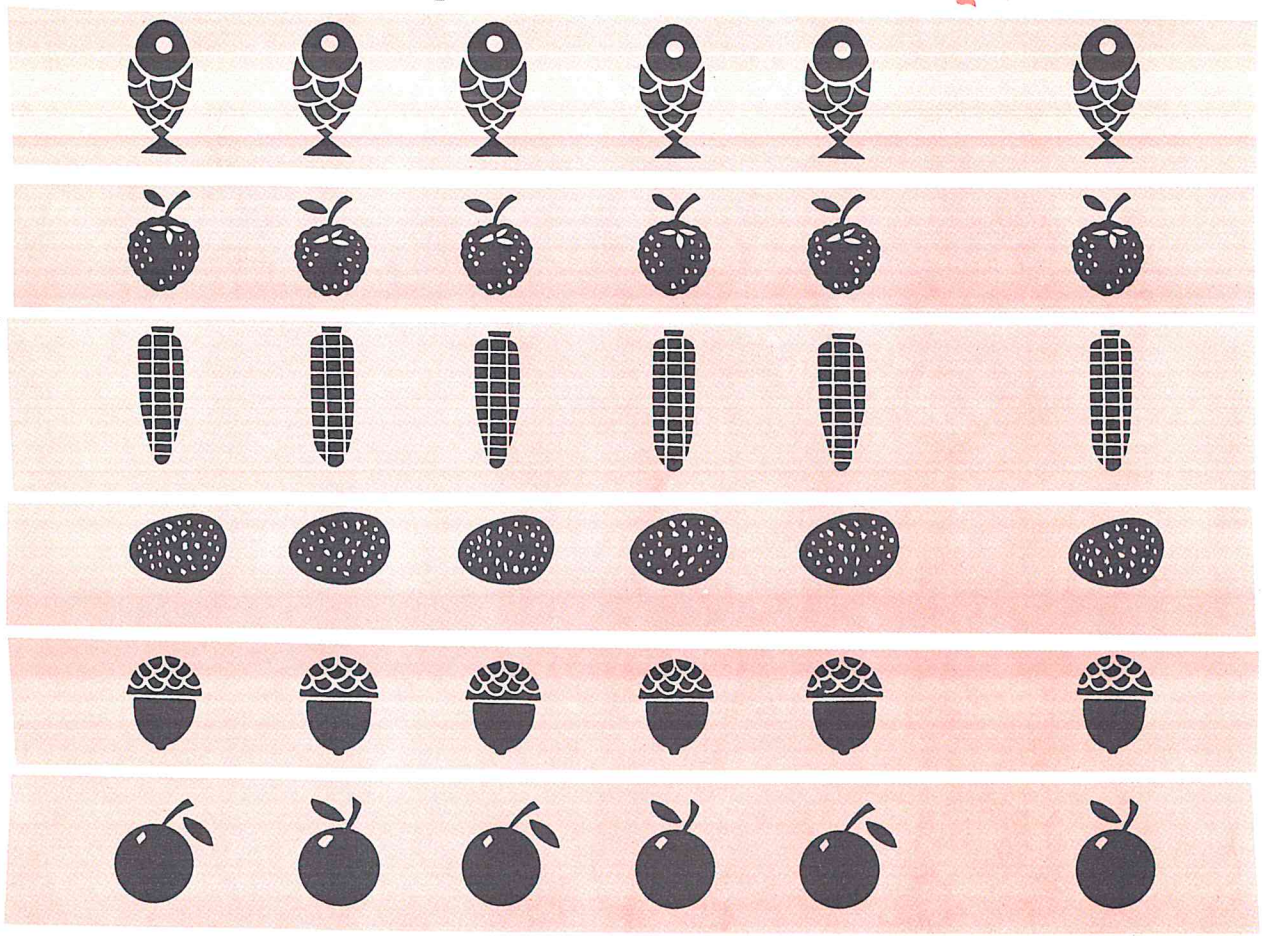
How many? How do you know?
Cover some. Now how many?

How many in each box? How do you know?

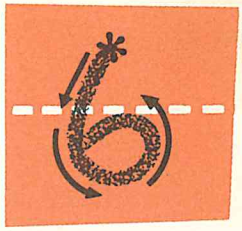


ONE FOR EACH

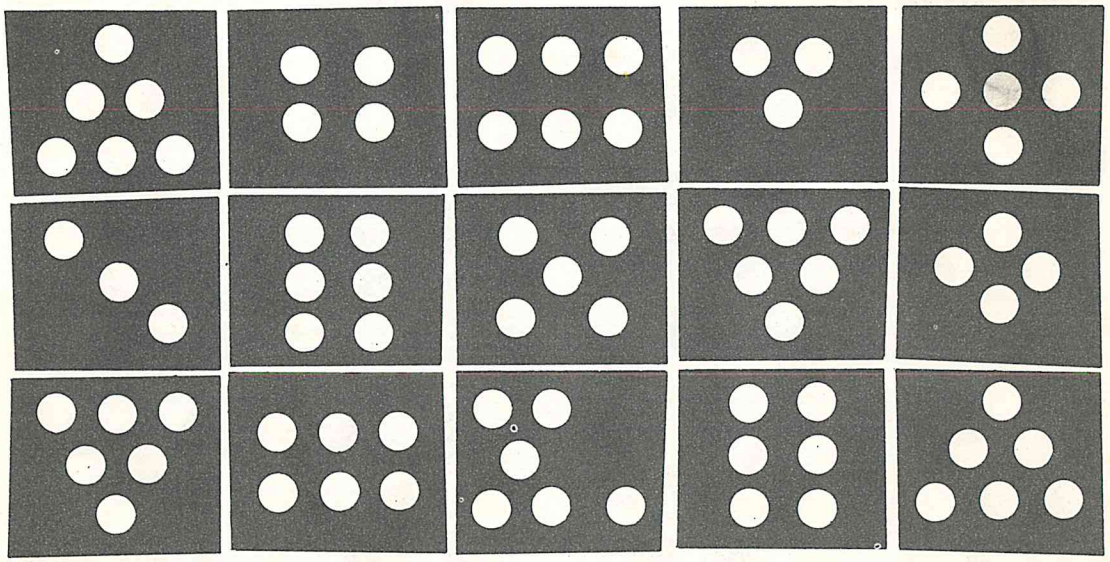
What is in row 1?
Where are the s? Is there one for each ?



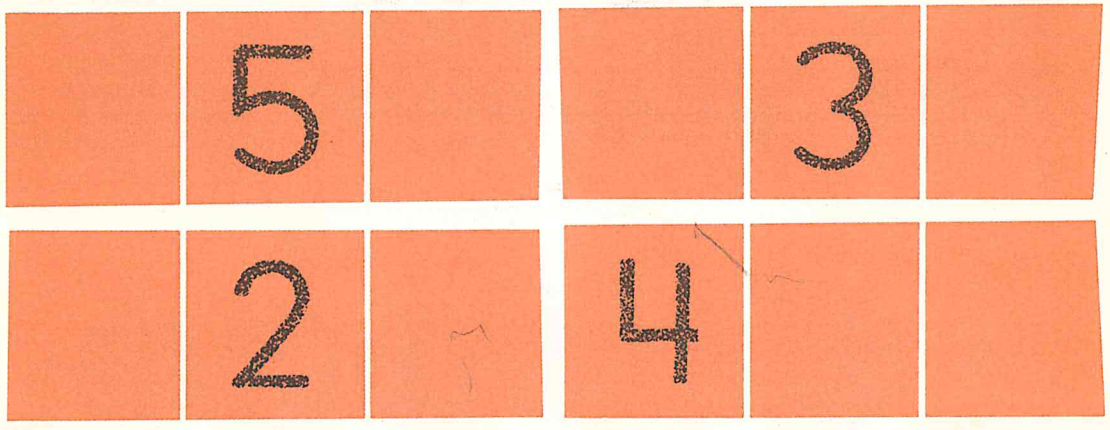
READING AND WRITING 6



How many in each picture?
Point to a numeral for each picture.



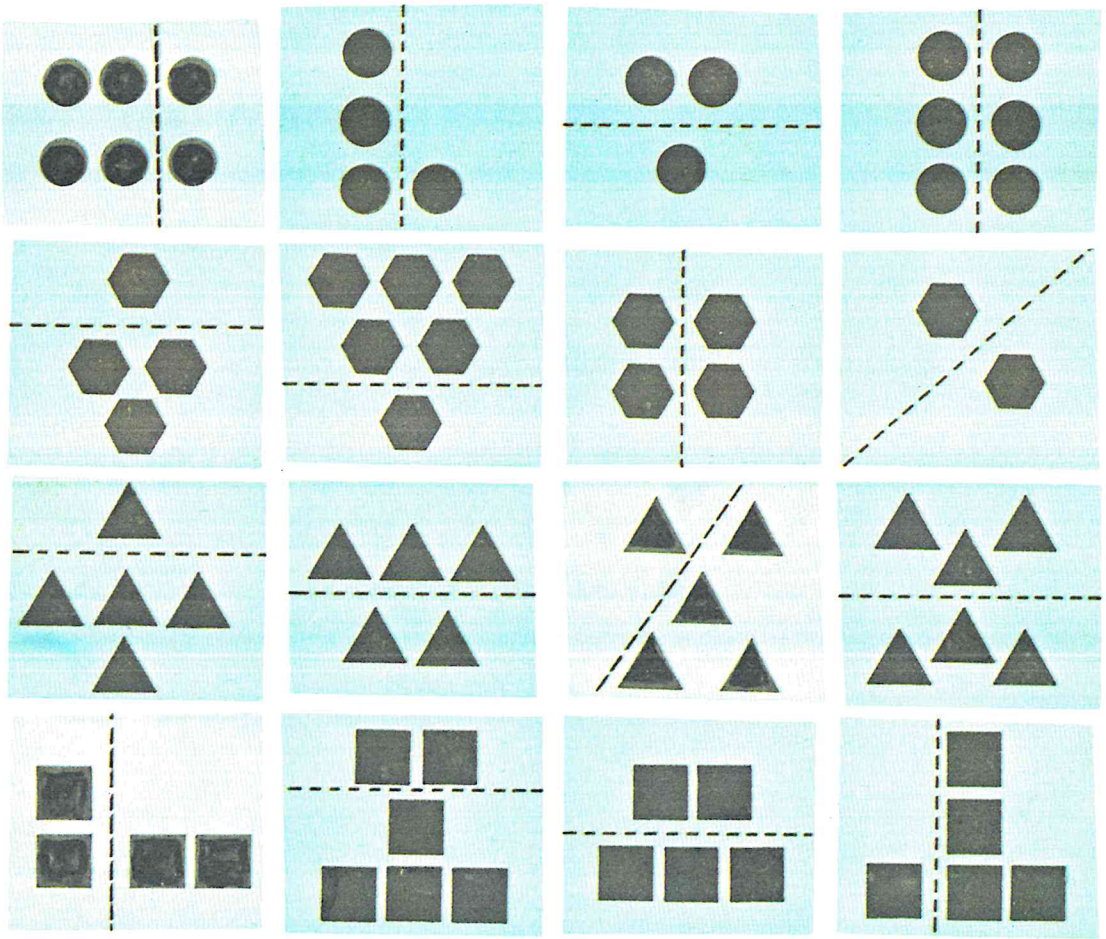
What numerals are missing?

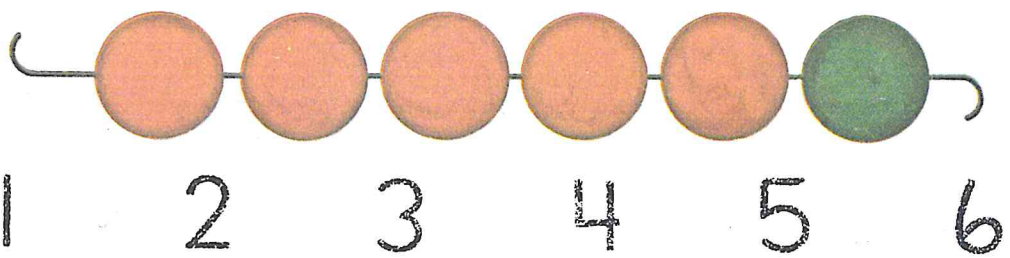


1 2 3 4 5 6

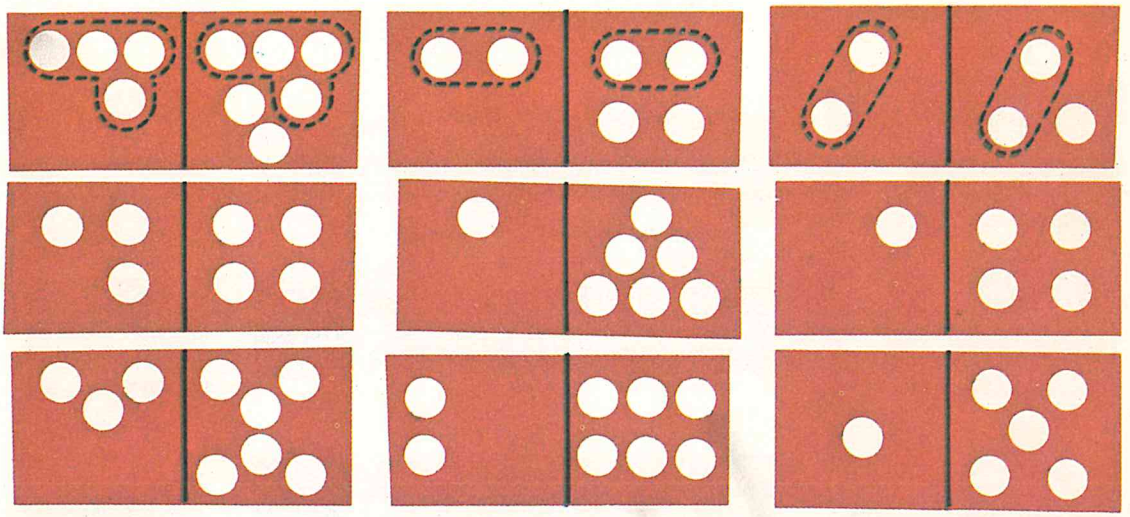
EXPLORING SETS

Tell number stories for each picture.

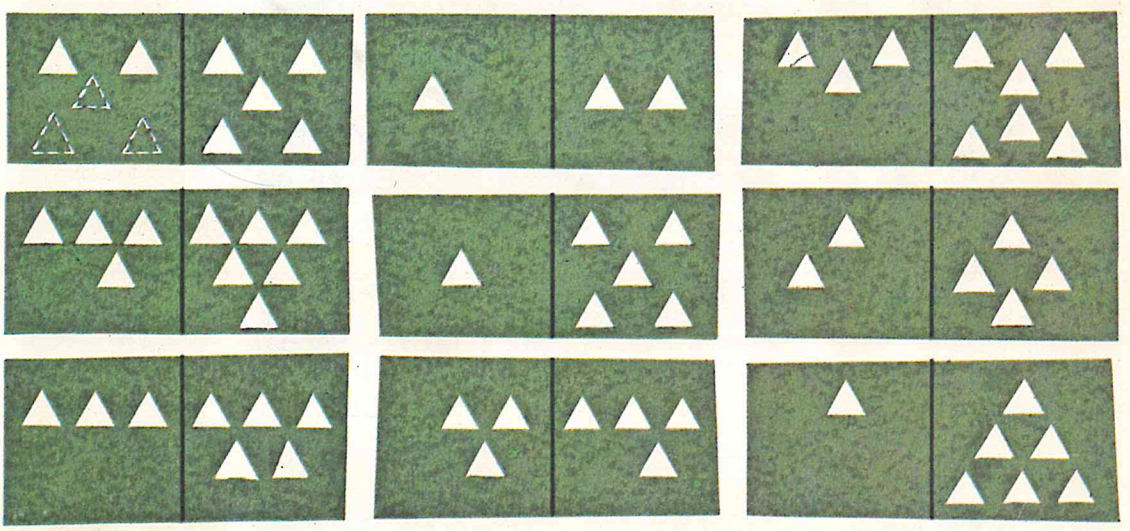




COMPARE THE SETS

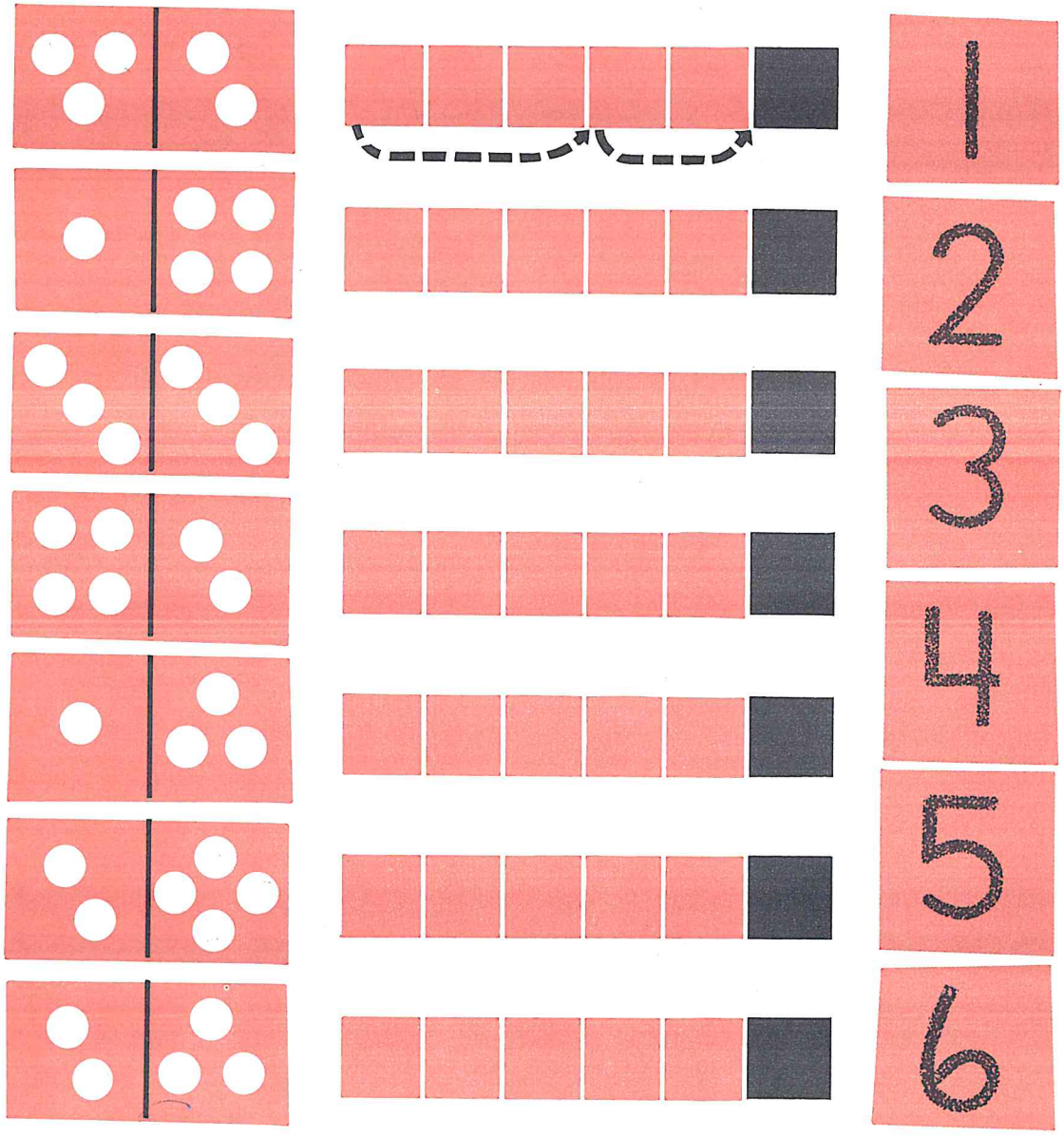


HOW MANY MORE DO YOU NEED?

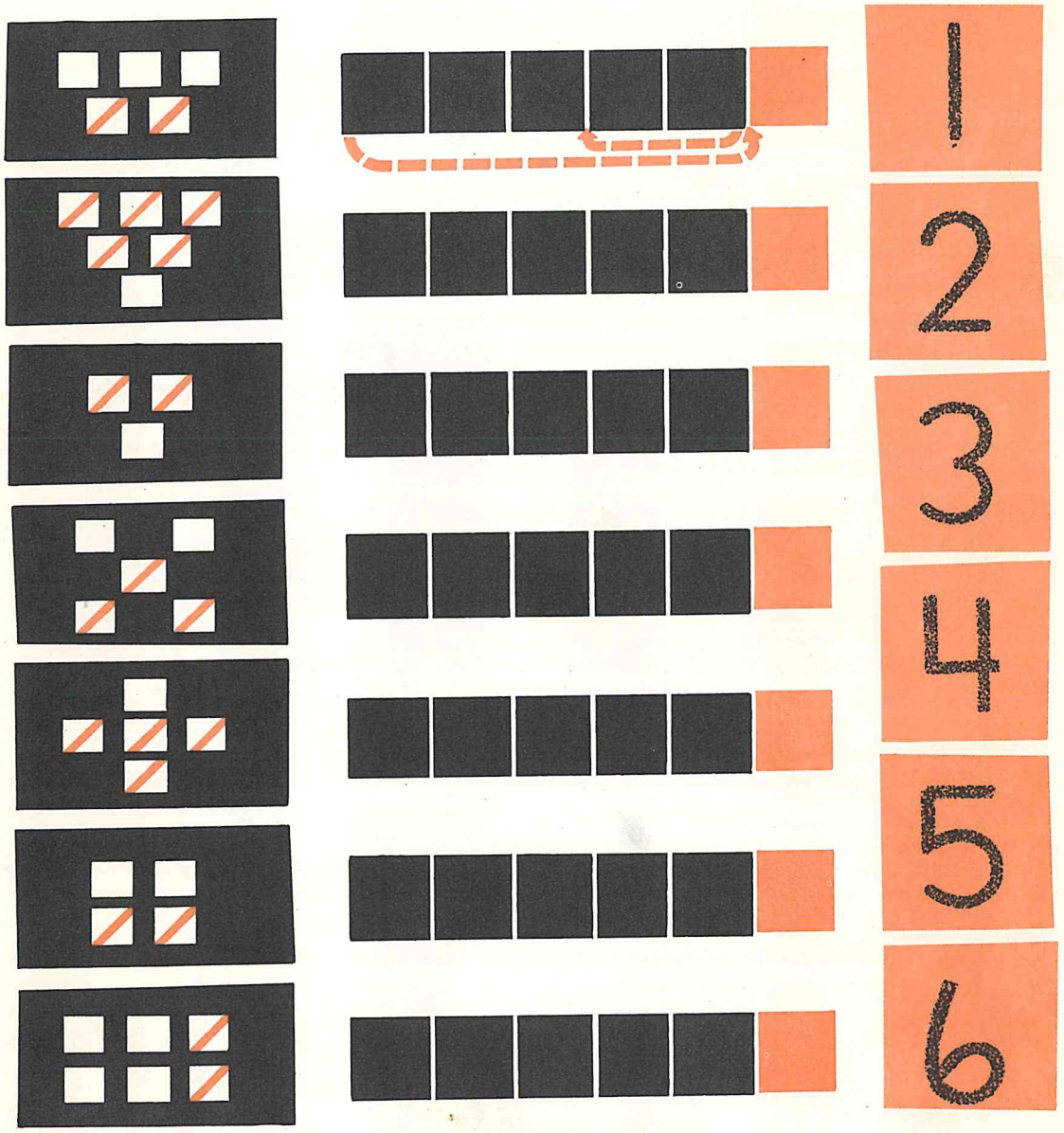


1 2 3 4 5 6

HOW MANY IN ALL?

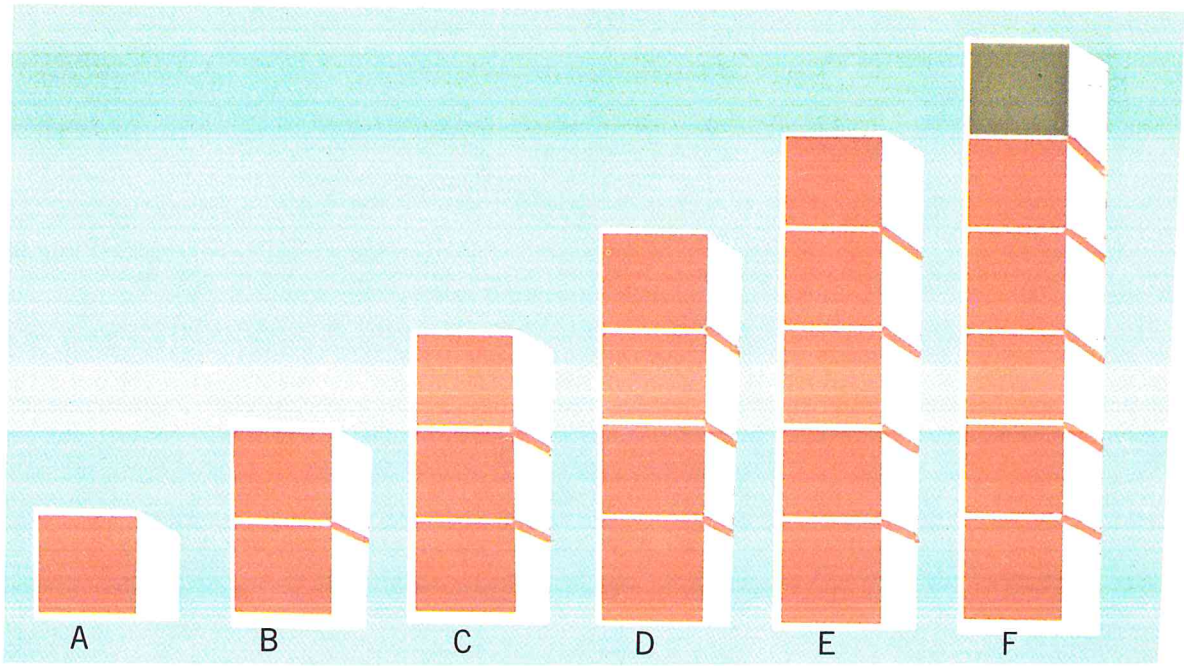


HOW MANY ARE LEFT?

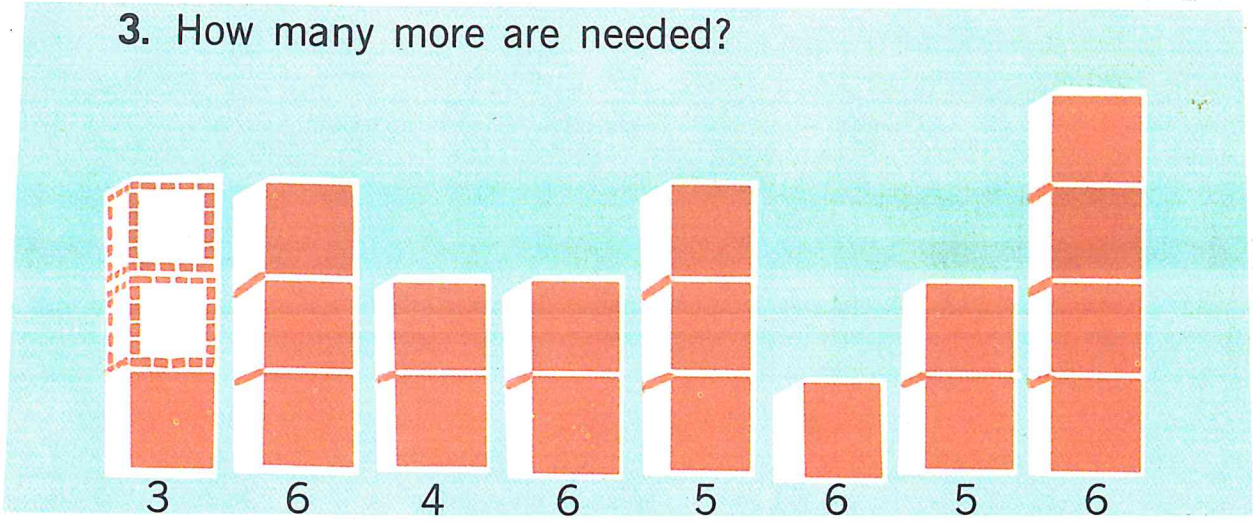


ONE THROUGH SIX

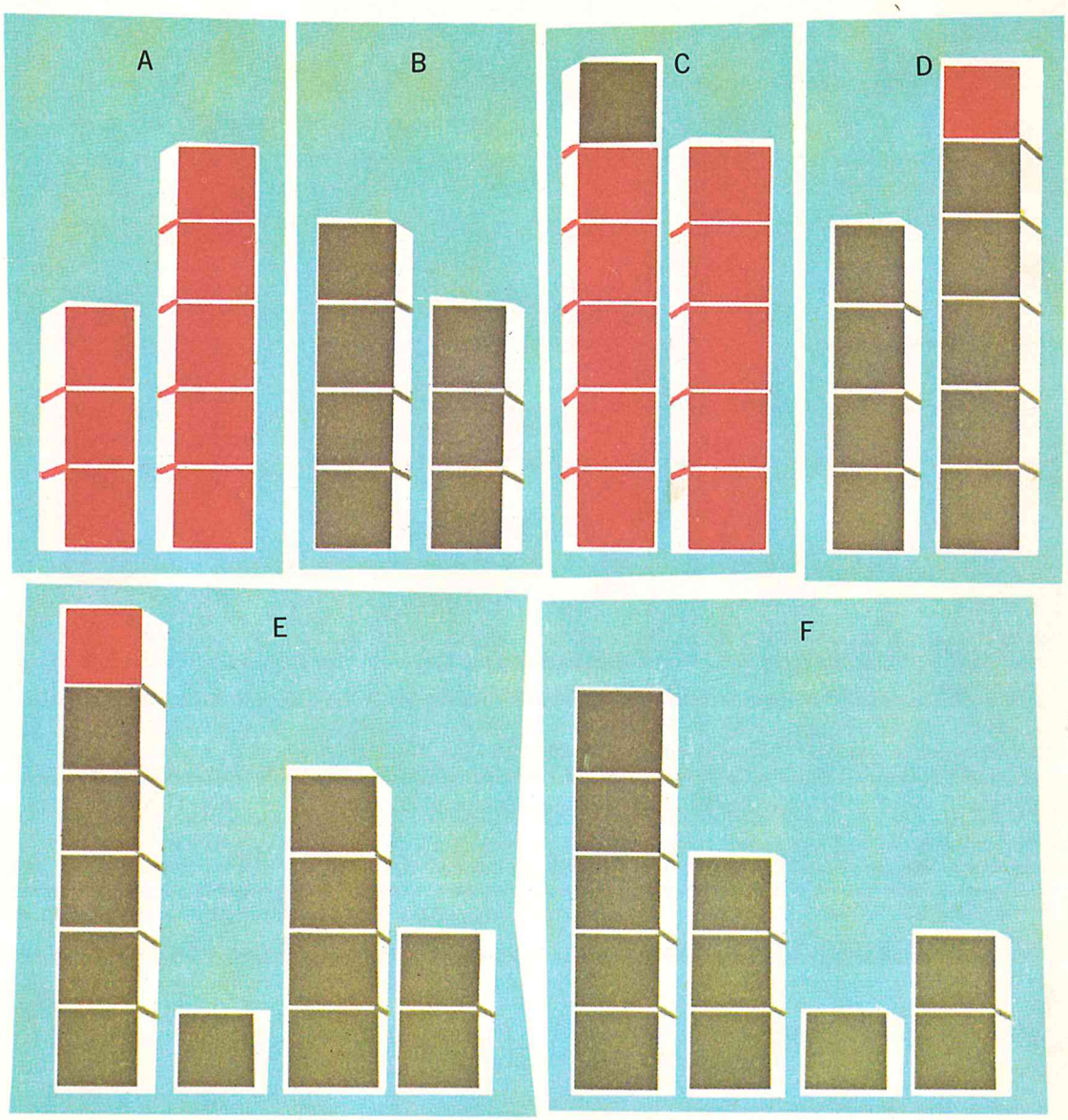
1. How many in each tower?
   Count from A to F. Count from F to A.
2. How many in B, D, F? How many in A, C, E?



3. How many more are needed?

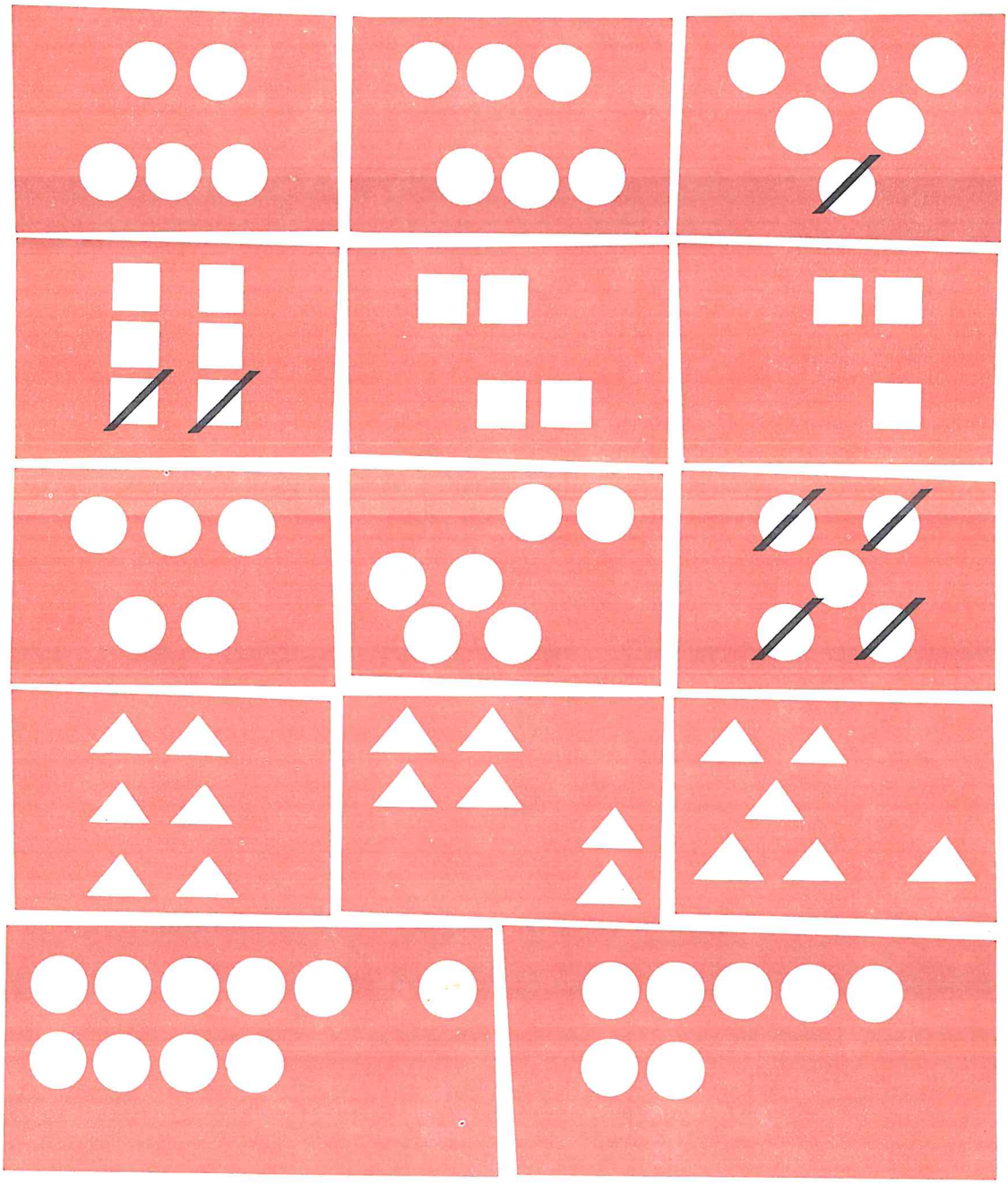


HOW MANY MORE?
HOW MANY FEWER?



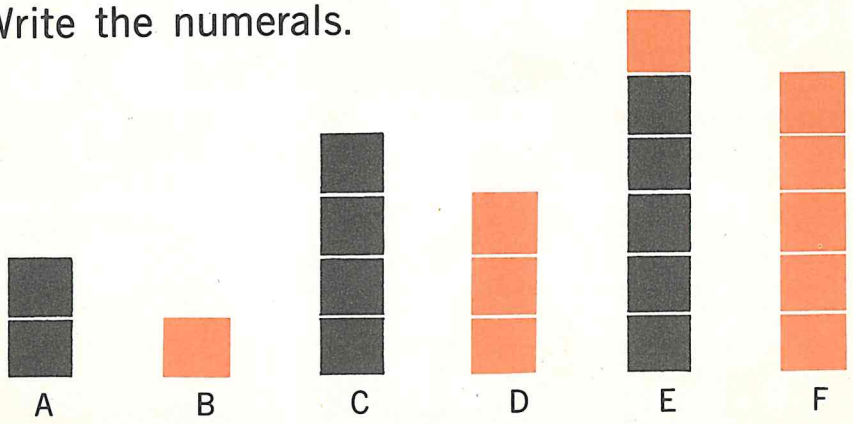
1 2 3 4 5 6

PROBLEM SOLVING

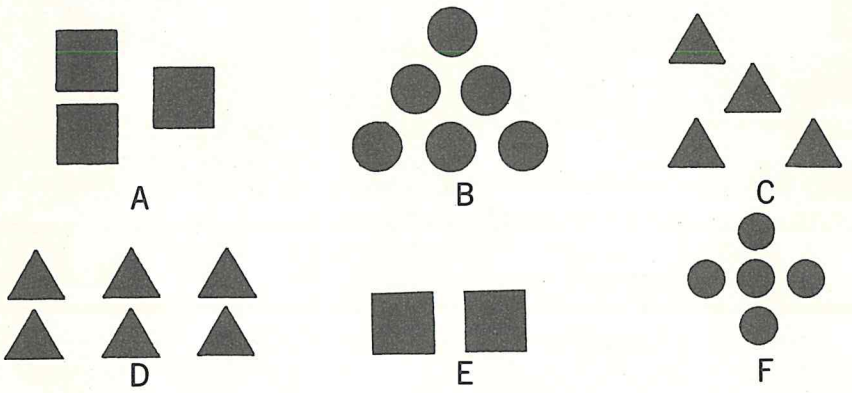


PRACTICE

1. How many in A, C, E? in B, D, F?
Write the numerals.



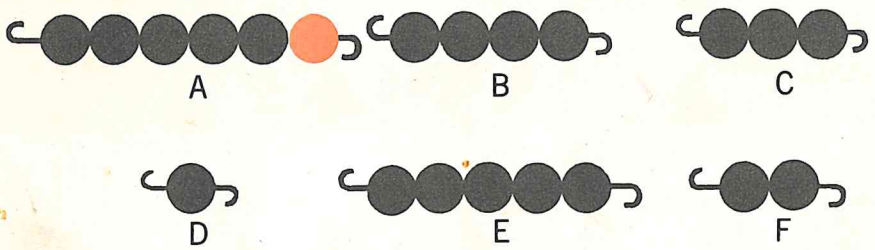
2. Write a numeral for each picture.



3. Read the numerals.

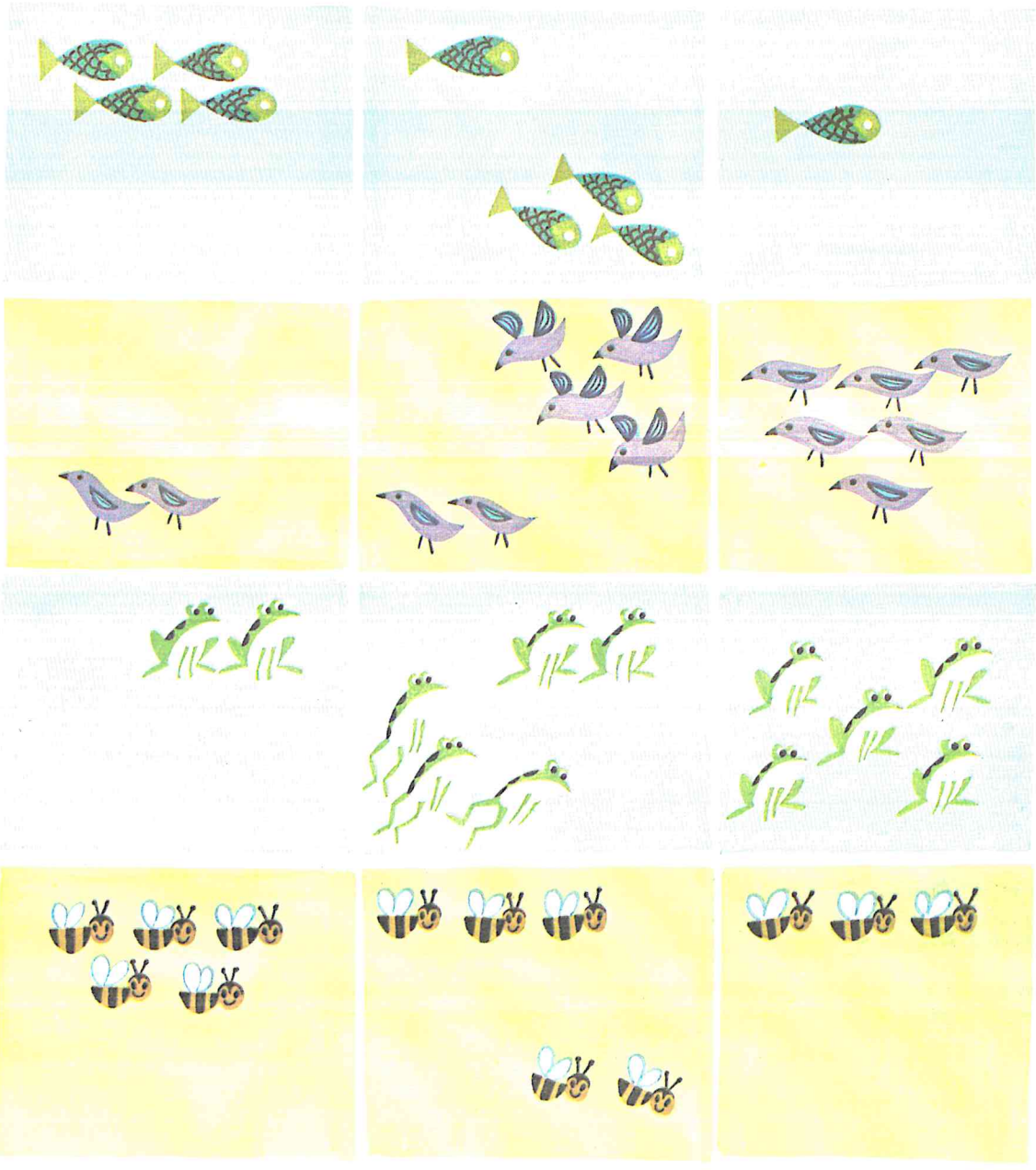
3 6 5 4 2 1

4. Match the numerals with the bead lines.



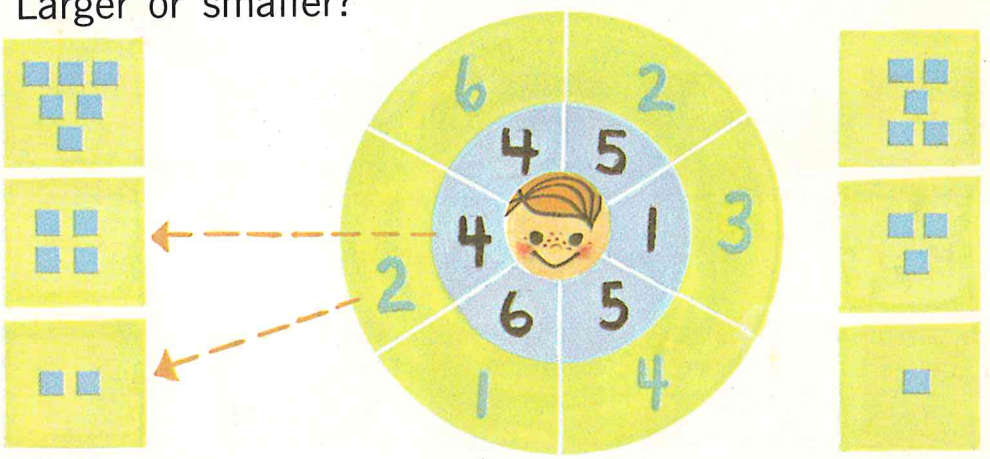
NUMBER STORIES

Tell a number story for each row.



USING WHAT YOU KNOW

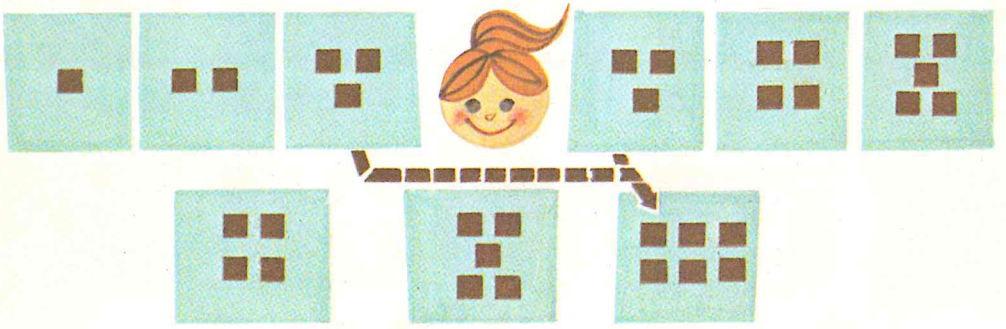
1. Larger or smaller?



2. Read the numerals in A—D. Write them in order.

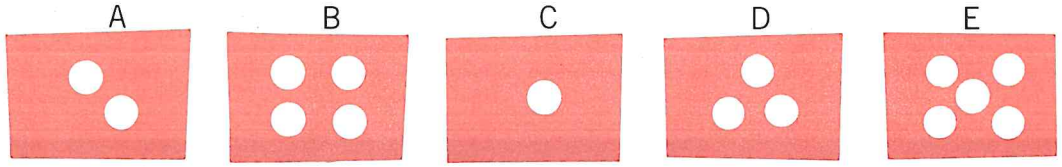
A	B	C	D
1	3	5	5
3	2	4	4
2	4	3	6

3. Tell stories about Sue's boxes.

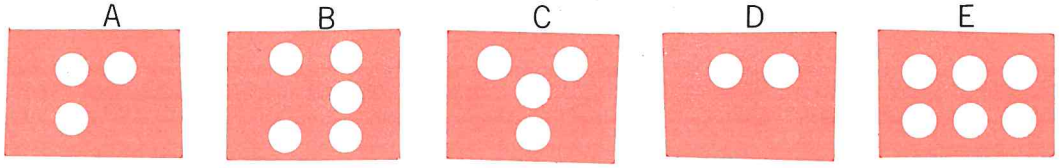


DO YOU REMEMBER?

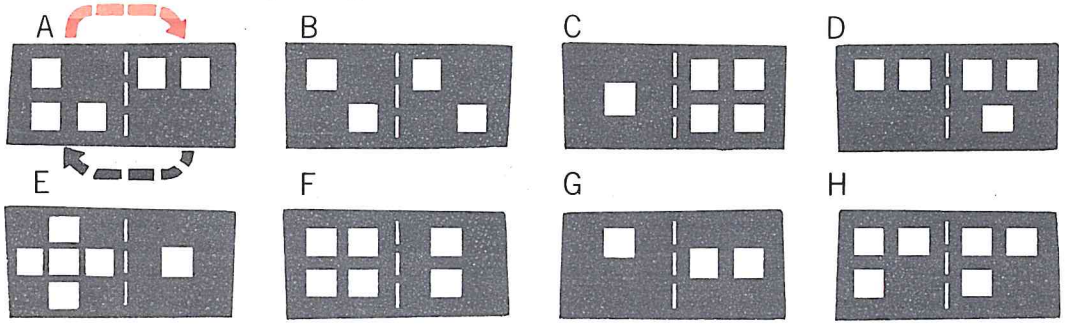
1. How many in each box? Think one more.



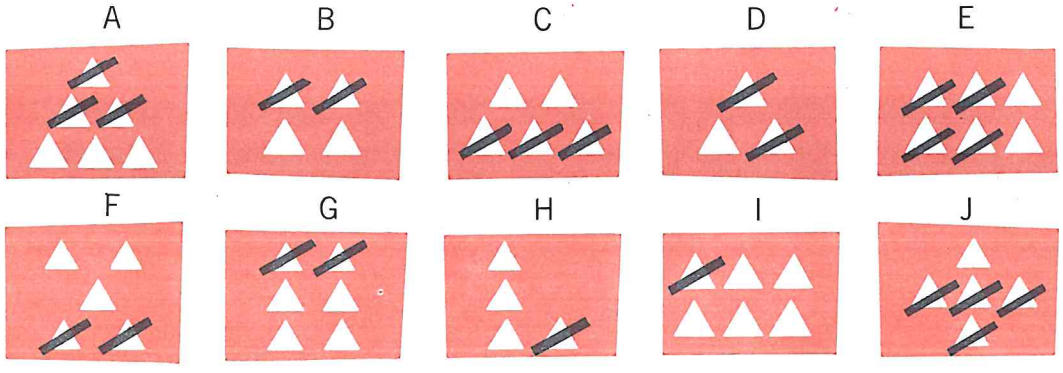
2. How many in each box? Think one less.



3. How many together?



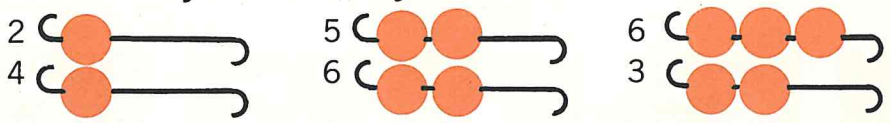
4. How many are left?



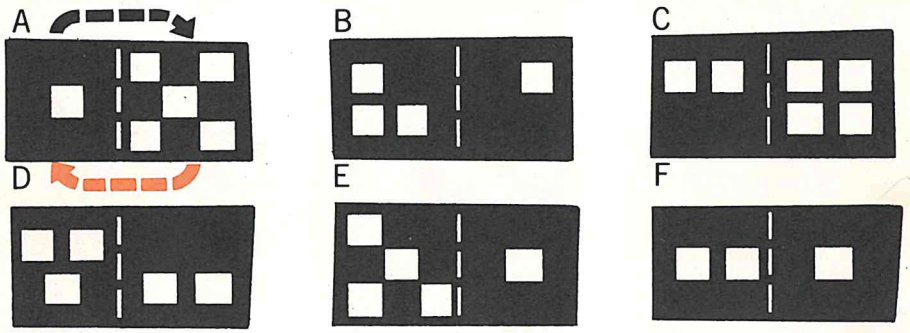
1 2 3 4 5 6

MORE PRACTICE

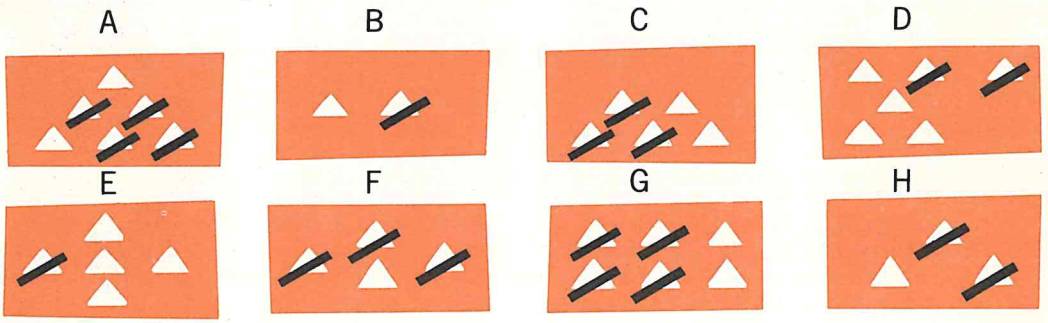
1. How many more do you need?



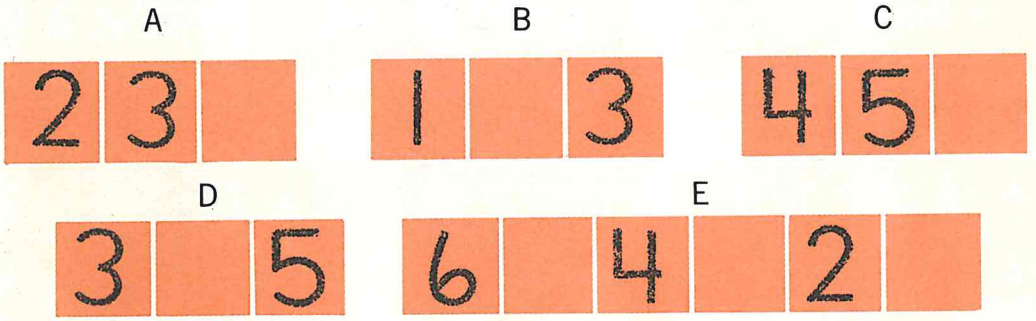
2. How many in all?



3. How many are left?



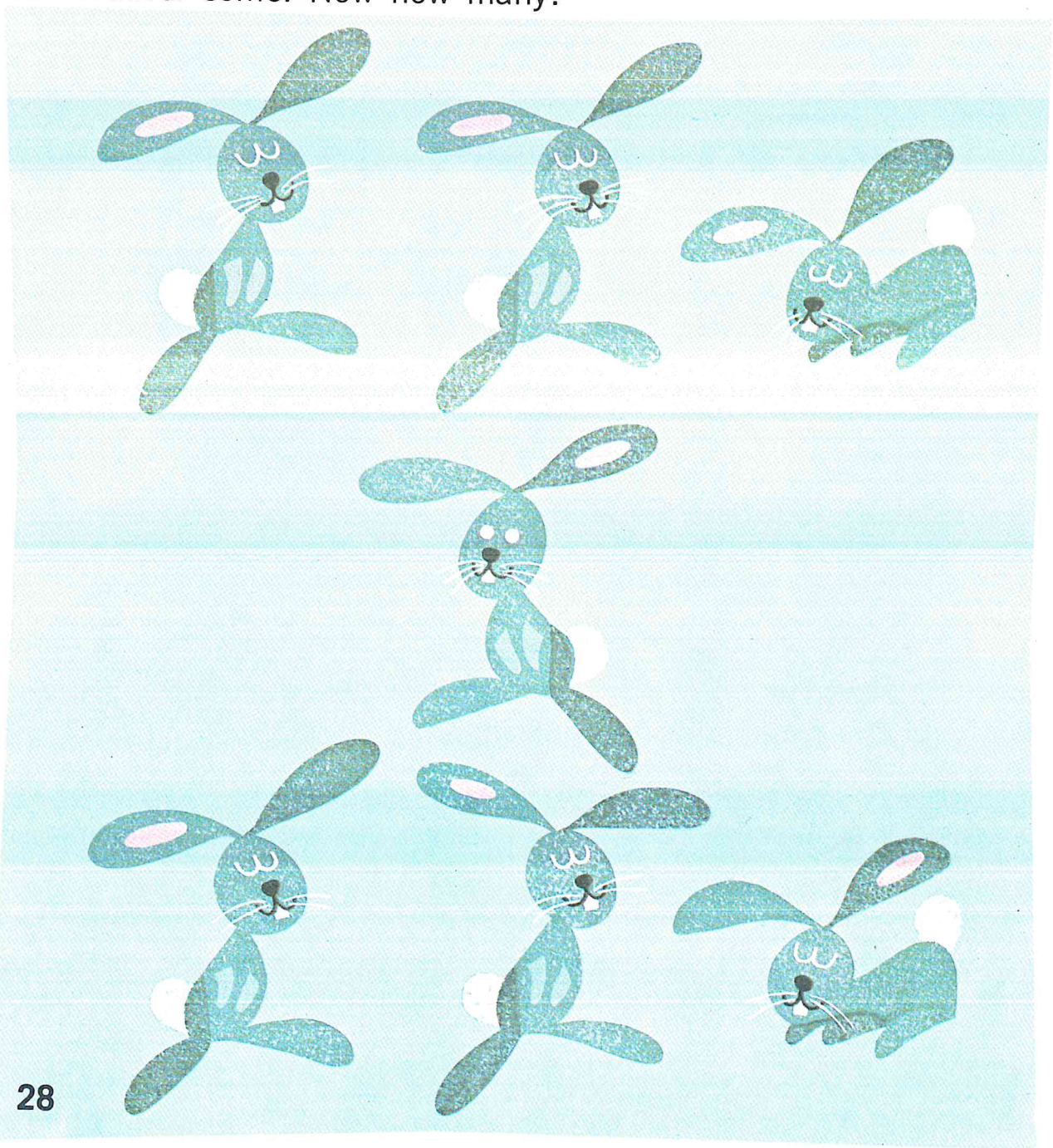
4. What numerals are missing?



HOPPER AND HIS FRIENDS

How many rabbits? How do you know?

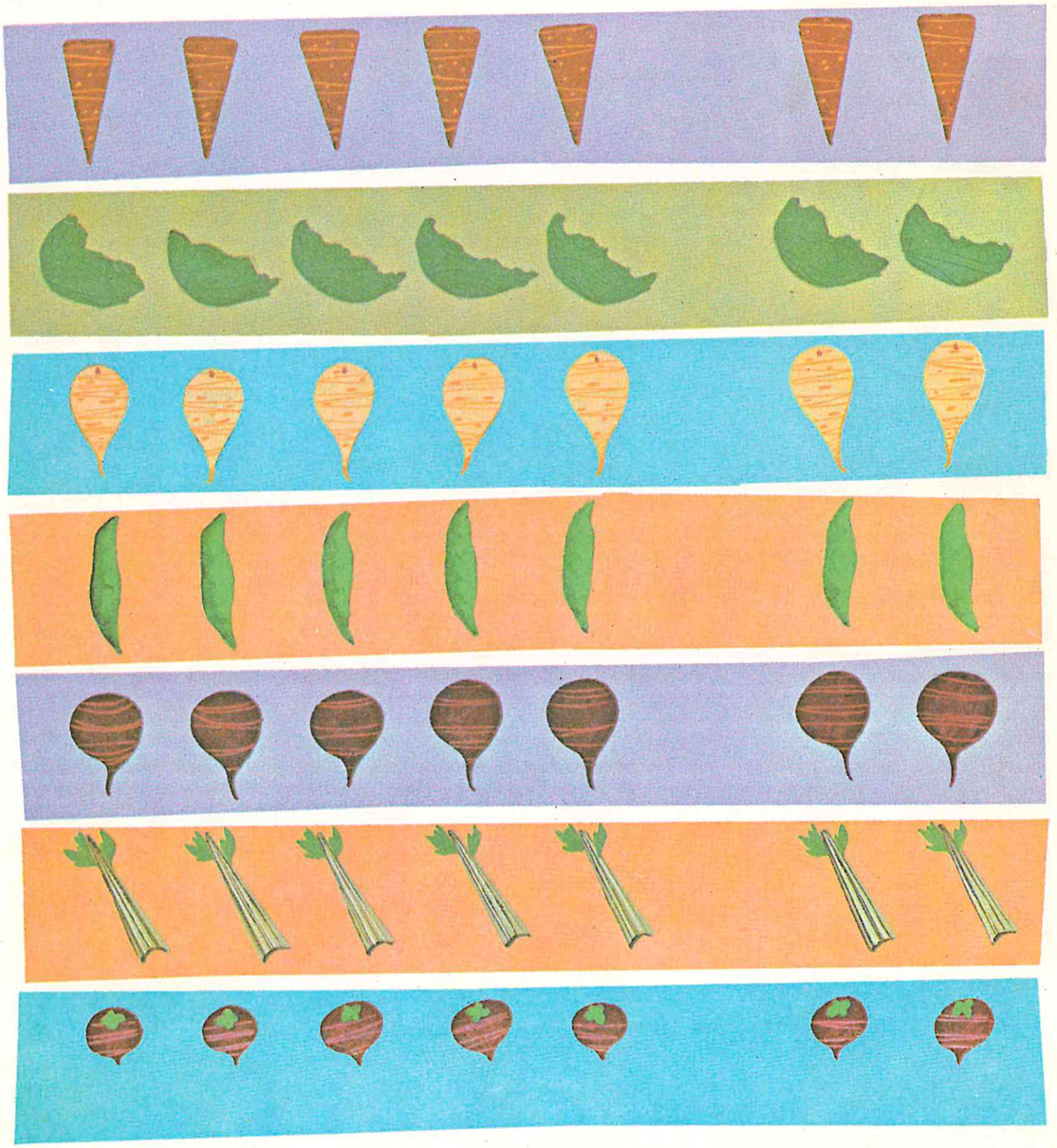
Cover some. Now how many?



ONE FOR EACH

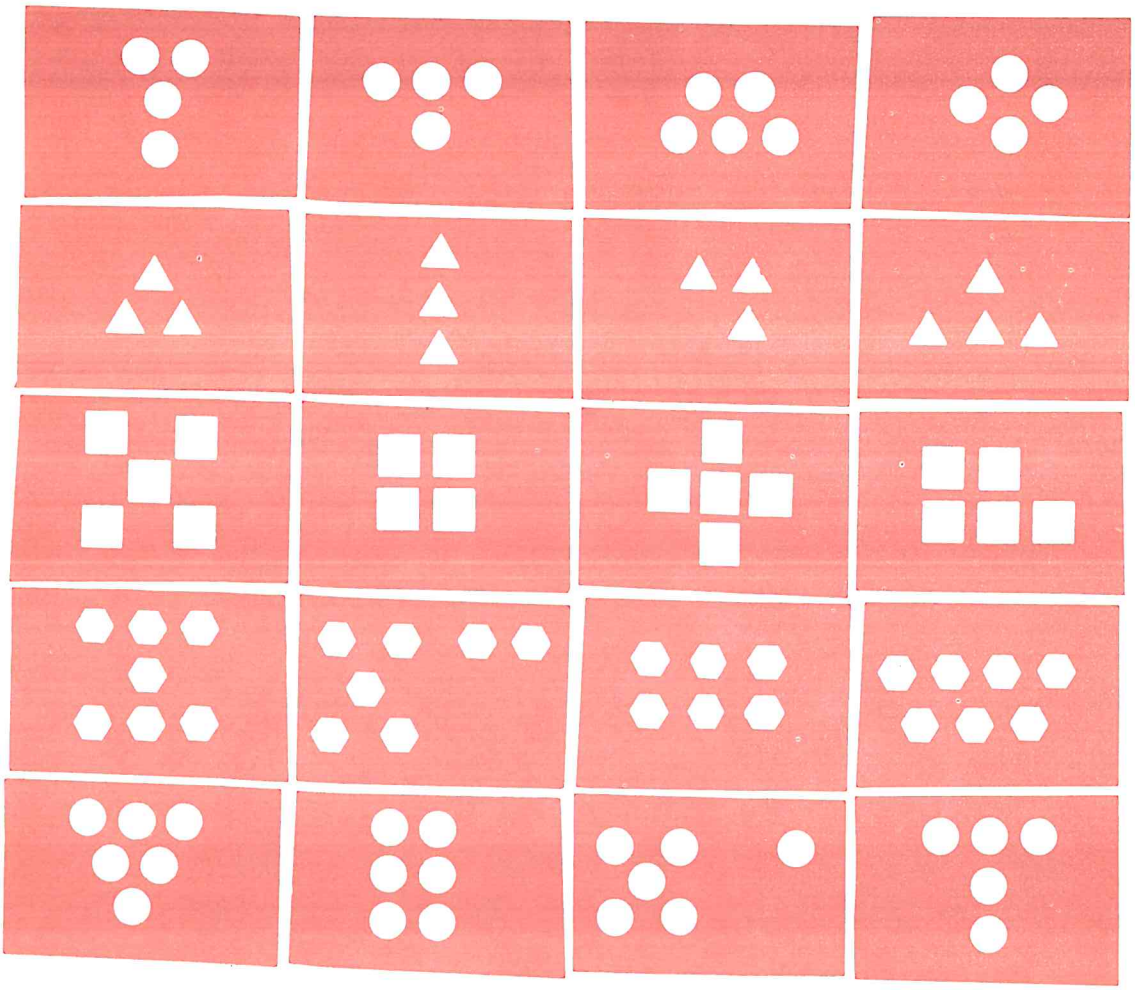
How many rows? How many in each row?

Is there a for each rabbit?



TELL HOW MANY

1. How many in each box in row 1?
   Is there the same number in each?
2. How many in the boxes in rows 2-5?

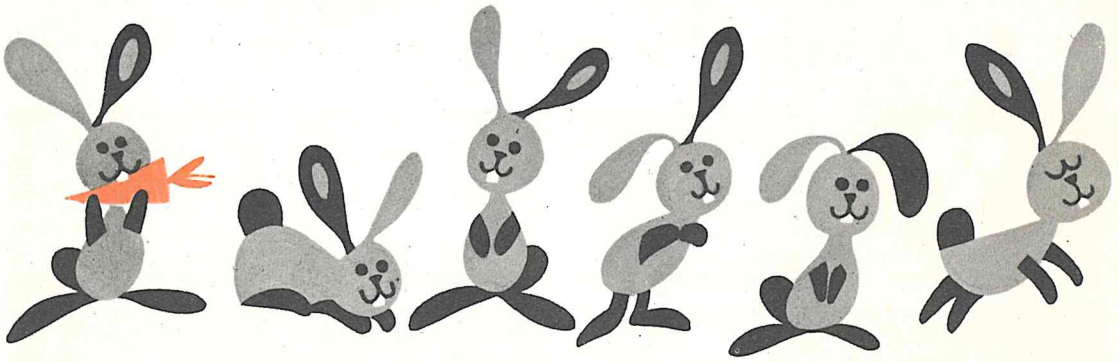


3. Find pictures for these numerals.

3 4 5 6 7

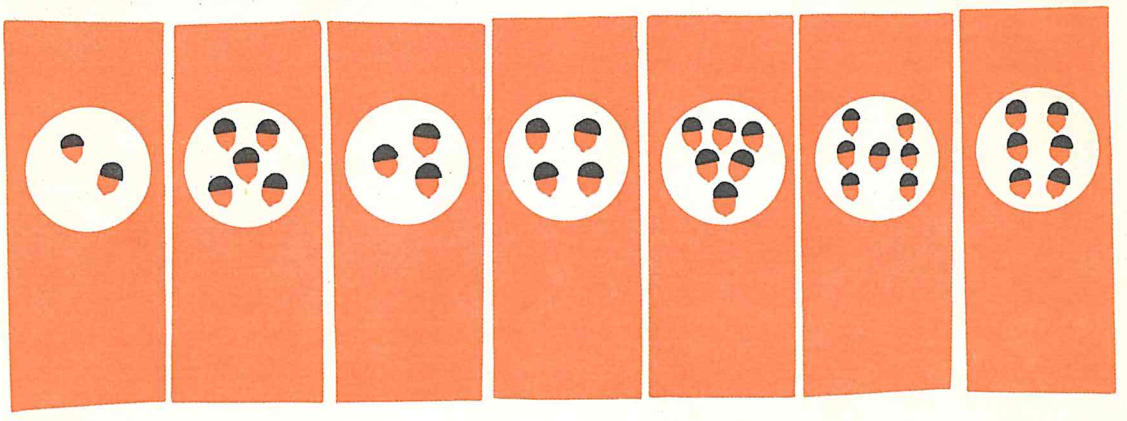
WHICH ONE IS IT?

Which rabbit is eating?

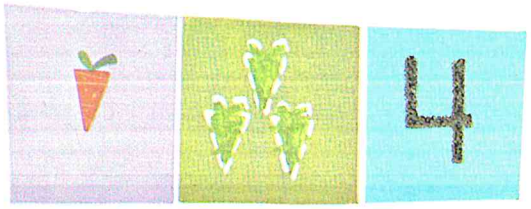


Which squirrel is eating?
Which one is climbing?

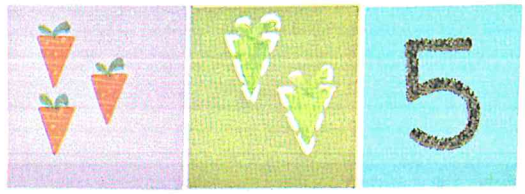
How many s in each set?



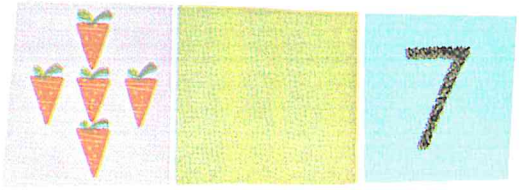
HOW MANY MORE ARE NEEDED?



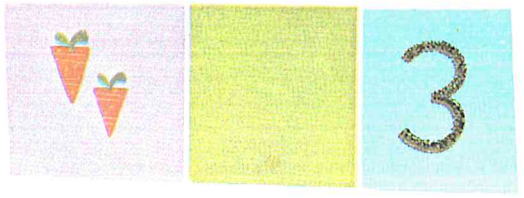
1 and 3 more are 4.



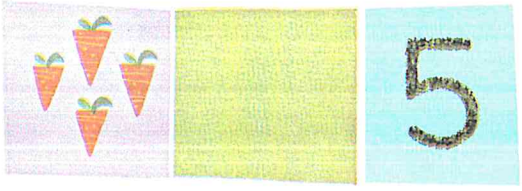
3 and 2 more are 5.



and more are 7.

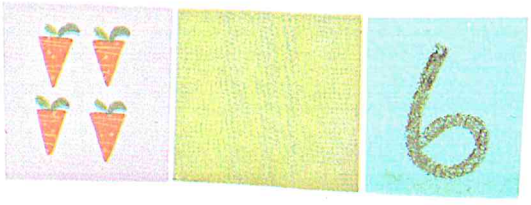


and more are 3.

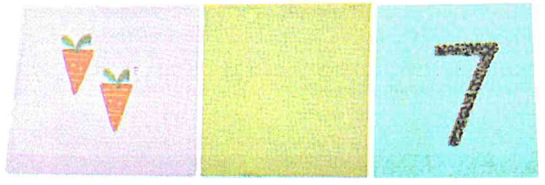


and more are 5.

and more are 7.



and more are 6.

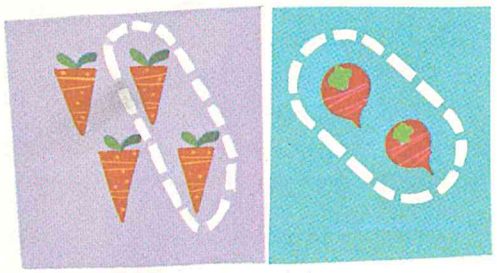


and more are 7.

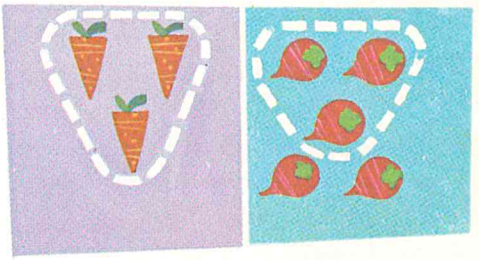
and more are 6.

and more are 7.

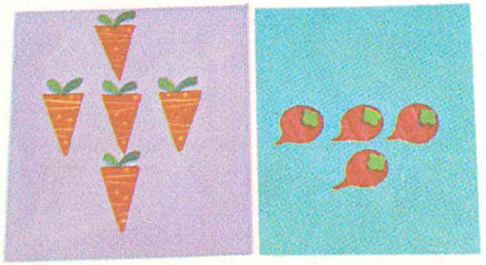
MORE OR LESS



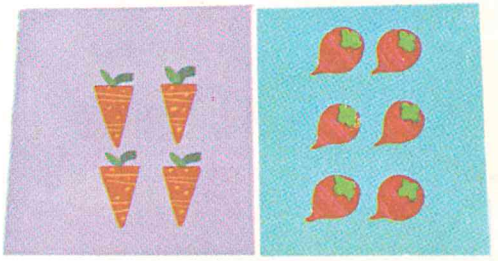
4 is 2 more than 2.



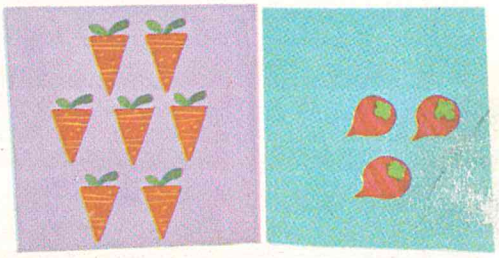
3 is 2 less than 5.



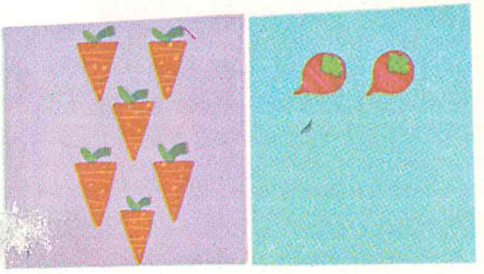
▲ is ■ more than 4.



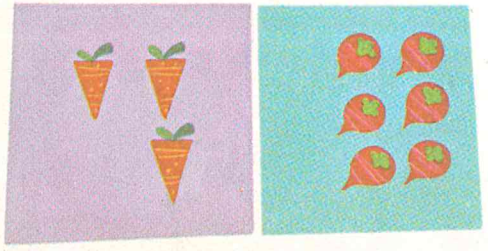
▲ is ■ less than 6.



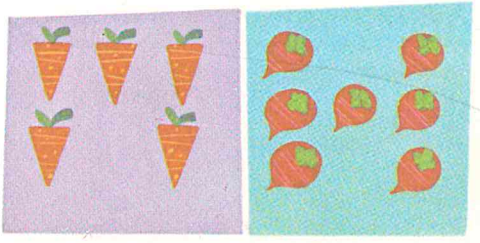
▲ is ■ more than 3.



▲ is ■ more than 2.

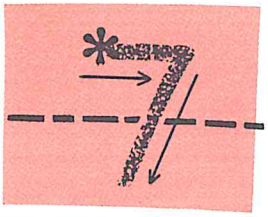


▲ is ■ less than 6.



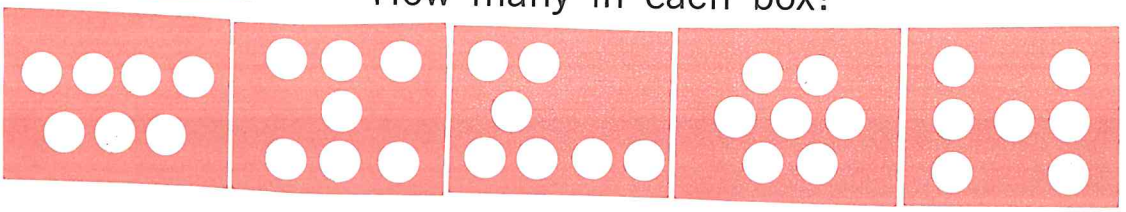
▲ is ■ less than 7.

1 2 3 4 5 6 7



READING AND WRITING 7

How many in each box?



What comes before?

	6
	4
	5
	7

What comes after?

2	
4	
6	
3	

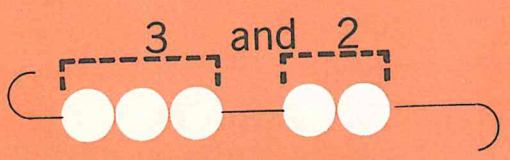
What numerals are missing?

1		3
	5	

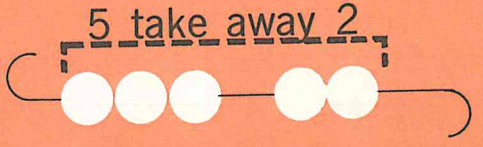
5	6	
3		5

HOW MANY TOGETHER?
HOW MANY LEFT?

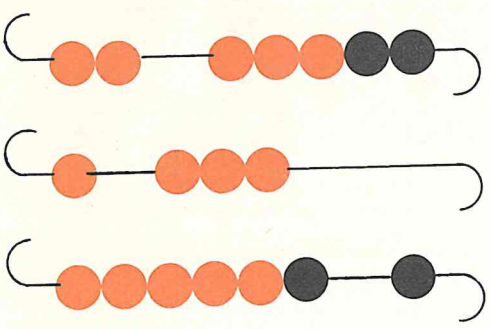
Tell the stories for each bead line.

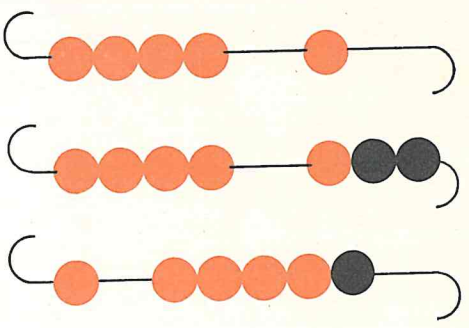


3 and 2 are ■.
2 and 3 are ■.



5 take away 2 is ▲.
5 take away 3 is ▼.





1.

1 and 6 are ■.
3 and 2 are ■.
4 and 3 are ■.
5 and 2 are ■.

4 take away 1 is ■.
7 take away 5 is ■.
5 take away 2 is ■.
7 take away 6 is ■.

2.

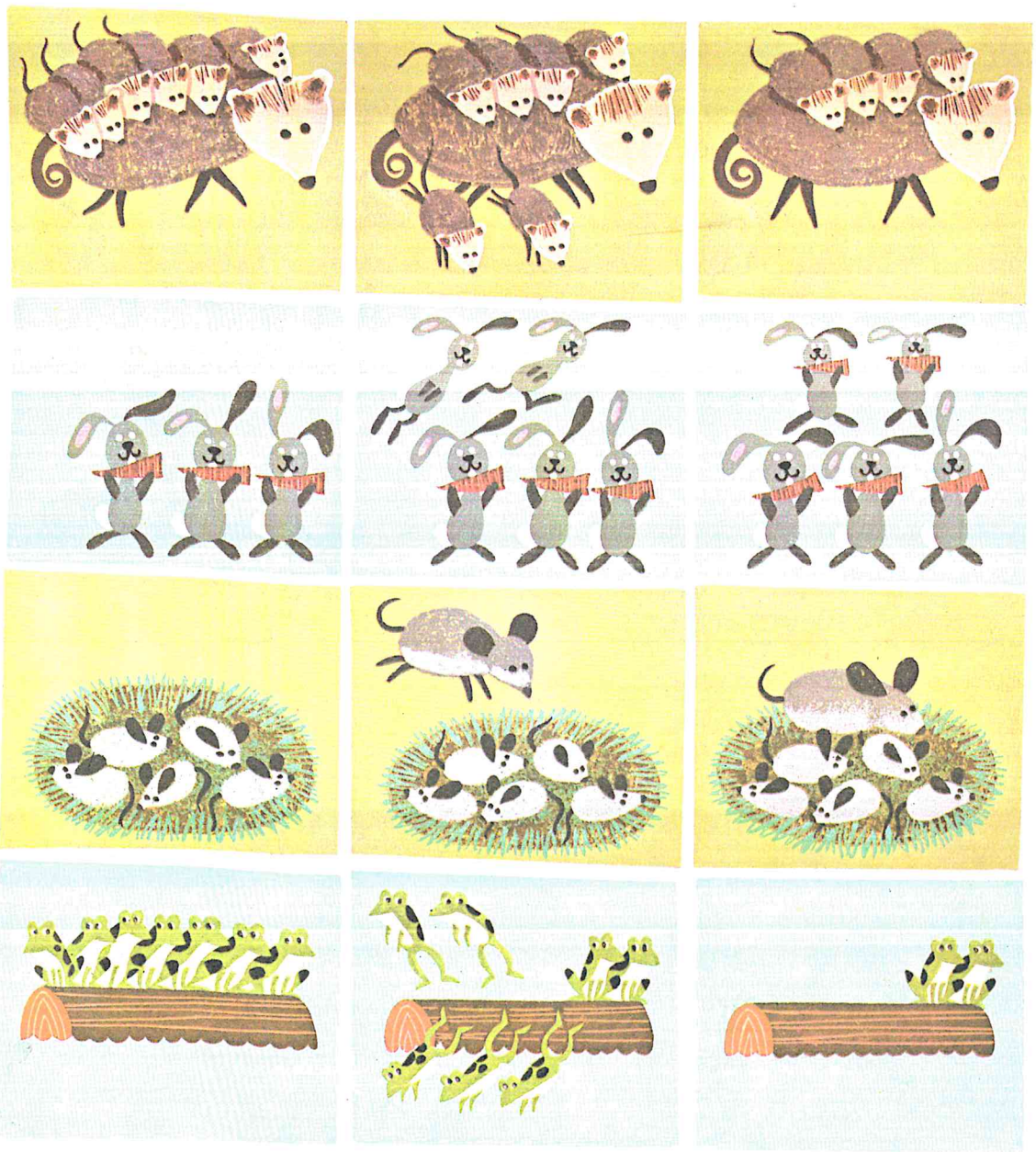
2 and 5 are ■.
1 and 3 are ■.
3 and 4 are ■.
1 and 5 are ■.

6 take away 5 is ■.
7 take away 4 is ■.
5 take away 4 is ■.
7 take away 3 is ■.

1 2 3 4 5 6 7

NUMBER STORIES

Tell a number story for each row.

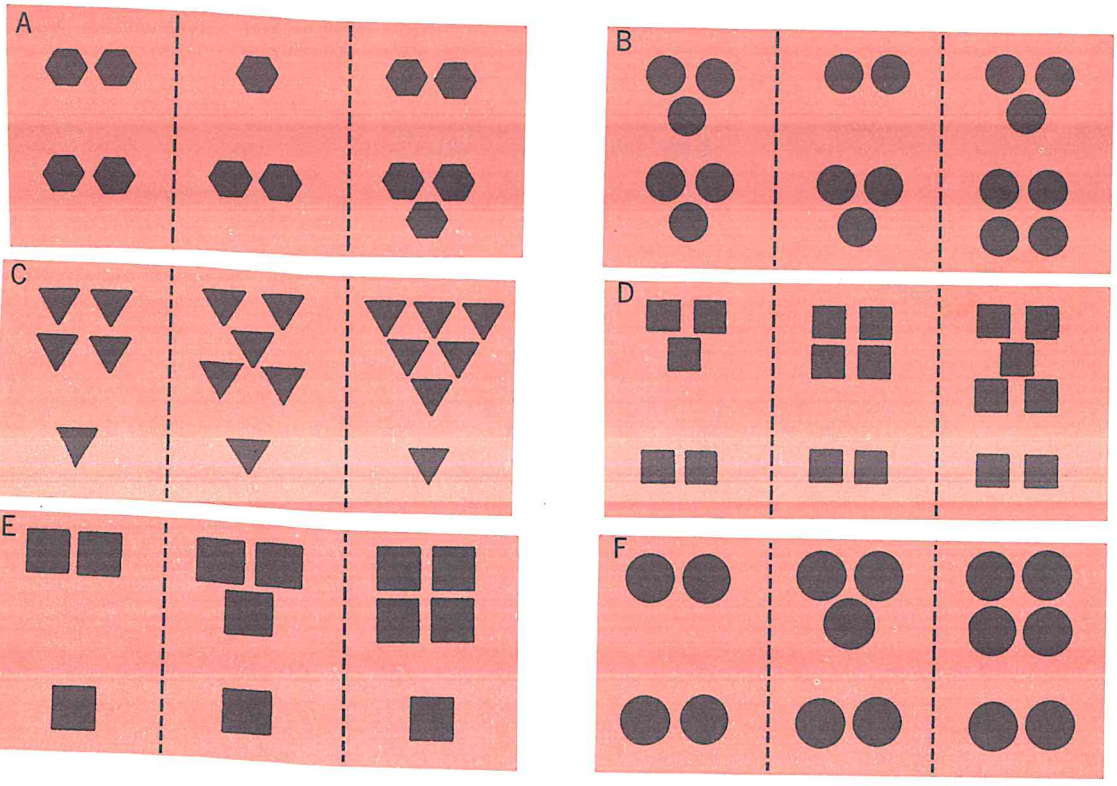


MORE NUMBER STORIES

Write a number sentence for each row.

USING SETS

Tell number stories about the boxes.



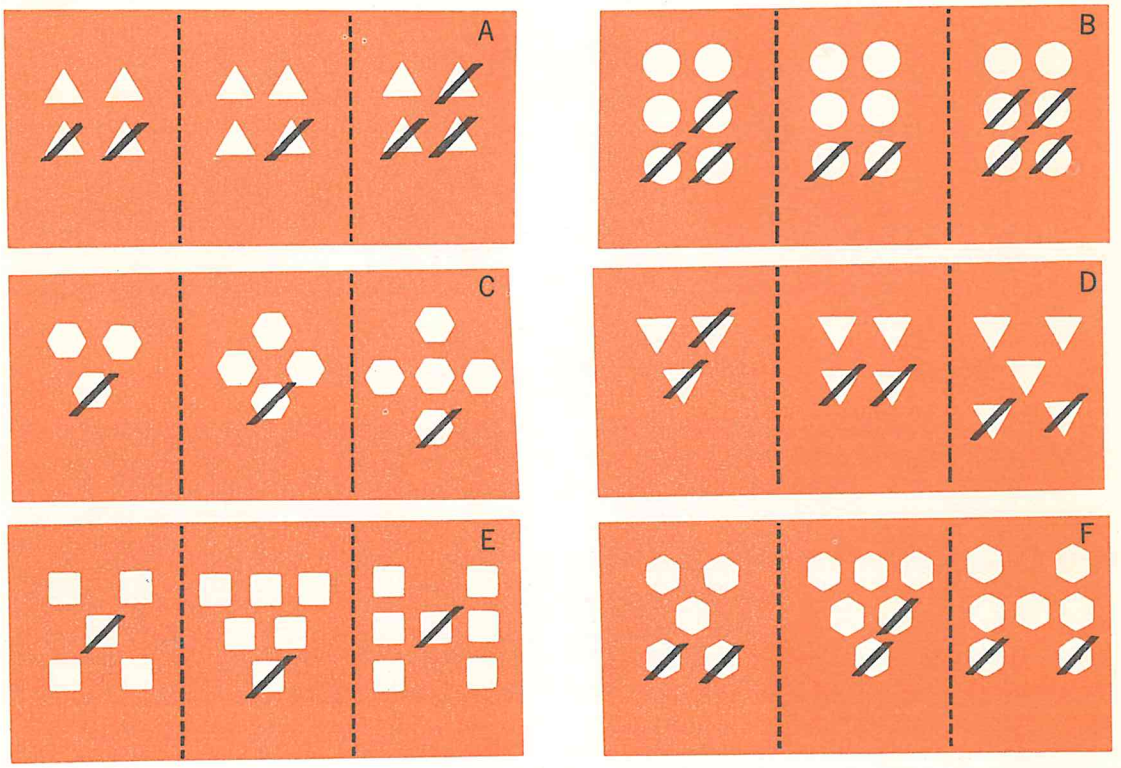
1. 2 and 2 are ____. 5 and 2 are ____.
   3 and 2 are ____. 2 and 4 are ____.
   6 and 1 are ____. 3 and 1 are ____.

2. 1 and 2 are ____. 2 and 3 are ____.
   5 and 1 are ____. 1 and 4 are ____.
   3 and 4 are ____. 3 and 3 are ____.

1 2 3 4 5 6 7

MORE ABOUT USING SETS

Tell number stories about the boxes.



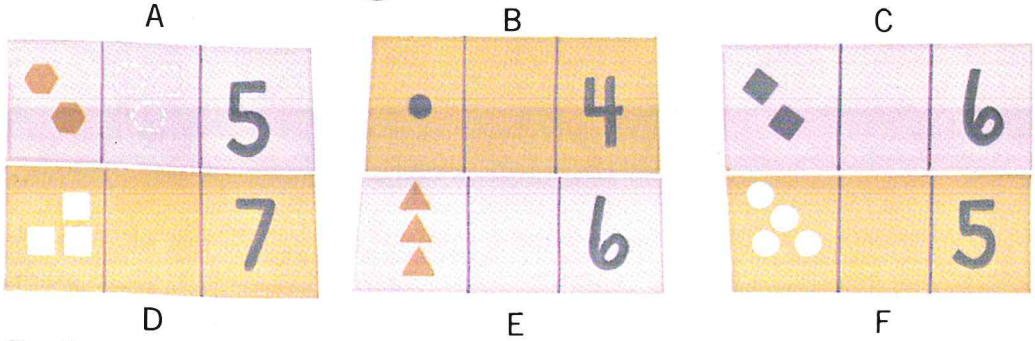
1. 3 take away 1 is ___.
   7 take away 1 is ___.
   6 take away 2 is ___.
   6 take away 4 is ___.
   4 take away 3 is ___.
   5 take away 1 is ___.

2. 6 take away 1 is ___.
   4 take away 1 is ___.
   7 take away 2 is ___.
   4 take away 2 is ___.
   6 take away 3 is ___.
   3 take away 2 is ___.

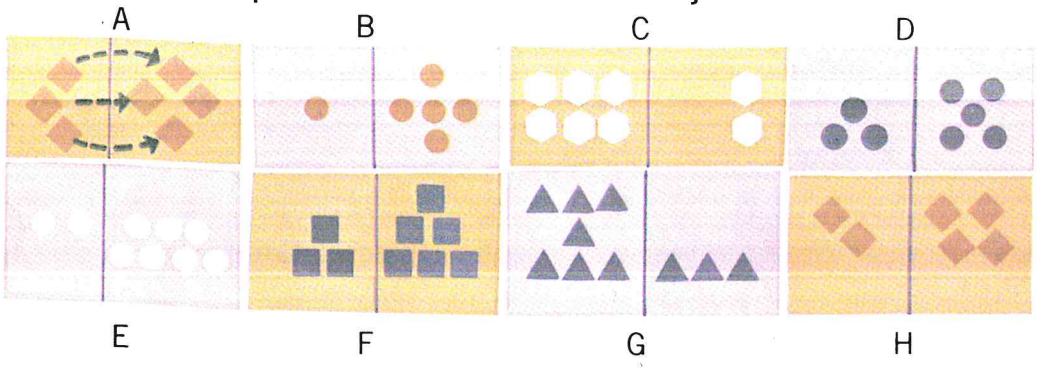
1 2 3 4 5 6 7

PRACTICE

1. Draw the missing sets.



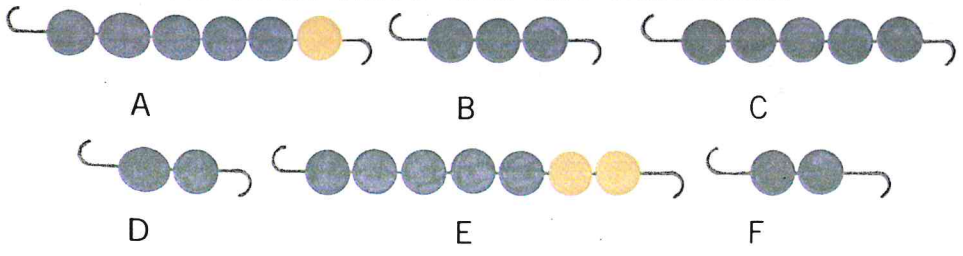
2. Copy the pictures. Match the objects.



3. Read the numerals.

4 5 7 6 3 2

4. Match the bead lines and the numerals.



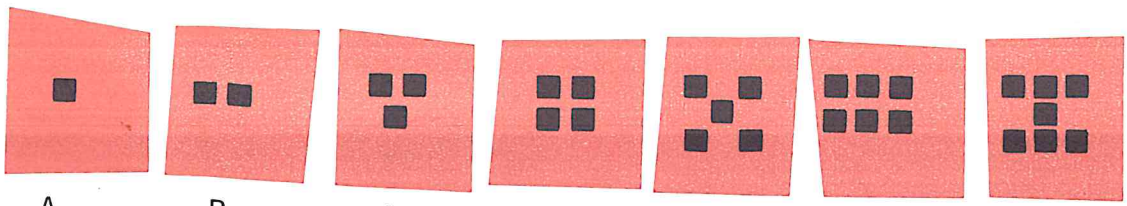
USING WHAT YOU KNOW

Find Hopper. Follow the path.
What did he see?

1 2 3 4 5 6 7

DO YOU REMEMBER?

Write a numeral for each picture.



1. 7 take away 2 is ___.
3 take away 2 is ___.
5 take away 3 is ___.
7 take away 3 is ___.

6 take away 4 is ___.
7 take away 5 is ___.
4 take away 2 is ___.
6 take away 3 is ___.

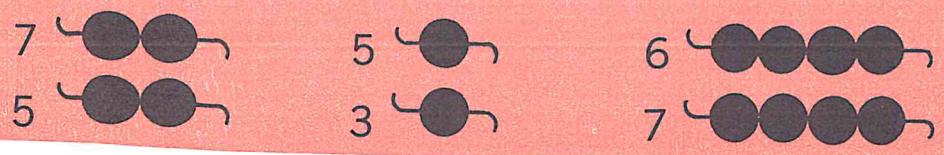
2. 5 and 2 are ___.
2 and 4 are ___.
5 and 1 are ___.
2 and 3 are ___.

1 and 6 are ___.
2 and 2 are ___.
4 and 3 are ___.
1 and 3 are ___.

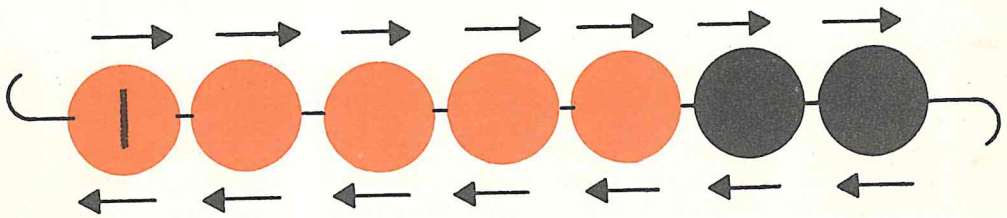
3. 7 is ___ more than 6.
3 is ___ less than 4.
5 is ___ more than 3.

5 is ___ less than 7.
7 is ___ more than 5.
6 is ___ more than 4.

4. How many more do you need?



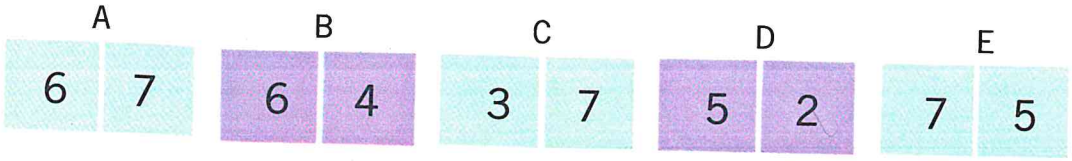
ENRICHMENT



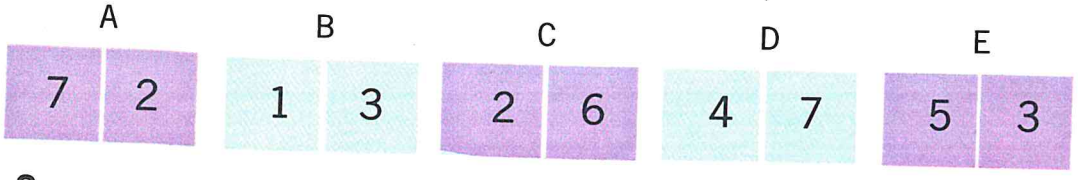
Begin On	Move	Where Are You?
1	→ → → → ← ←	3
3	← ← → → → → →	
4	→ → → ← ← ← ←	
2	→ → → → → ← ←	
5	← ← ← ← → →	
6	← ← ← ← ← → → →	
2	→ → → → ← ← ←	

MORE PRACTICE

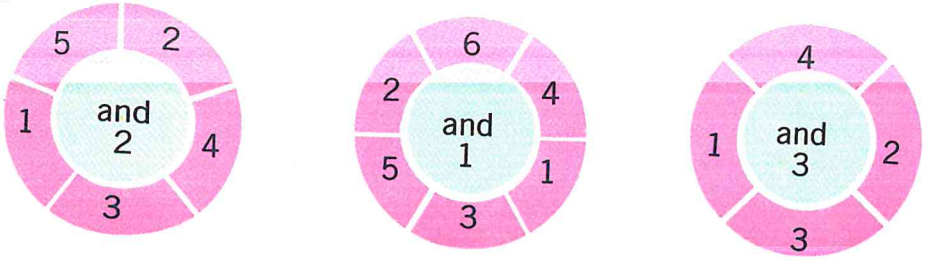
1. Which is more? How many more?



2. Which is less? How many less?

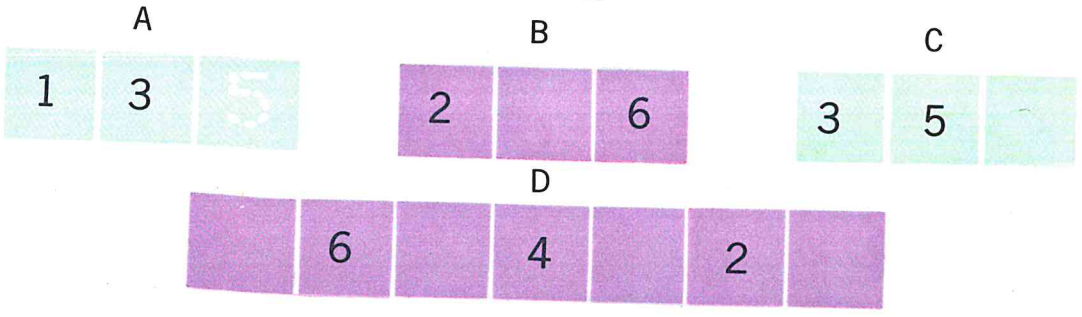


3.



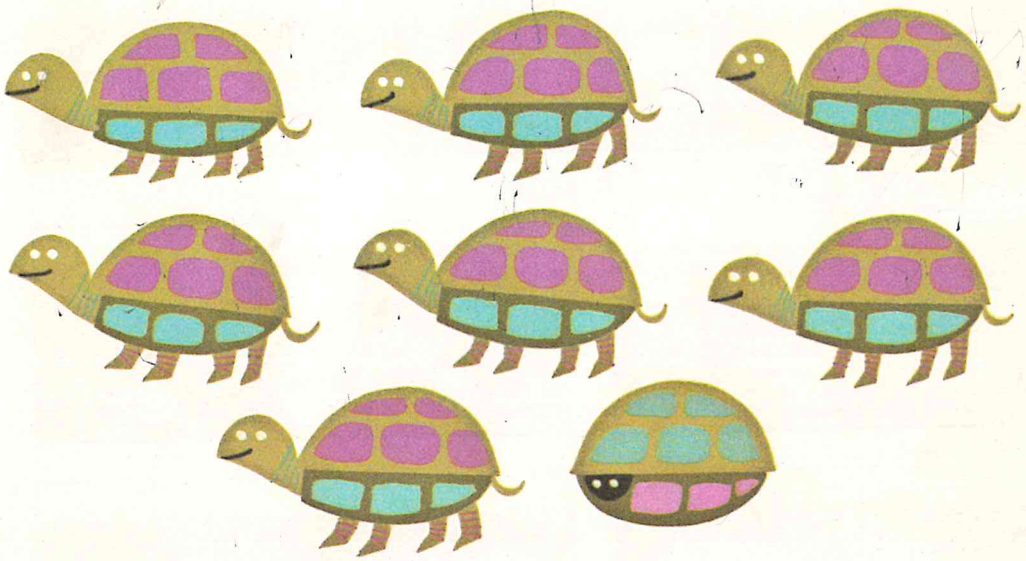
4.

5. What numerals are missing?

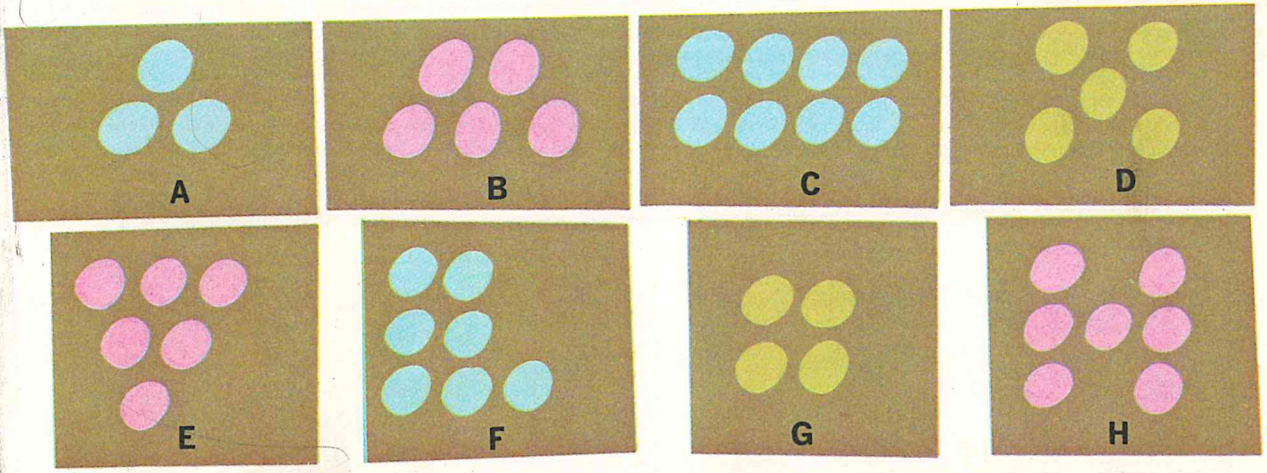


AT THE POND

How many s? How do you know?
Cover some. Now how many?



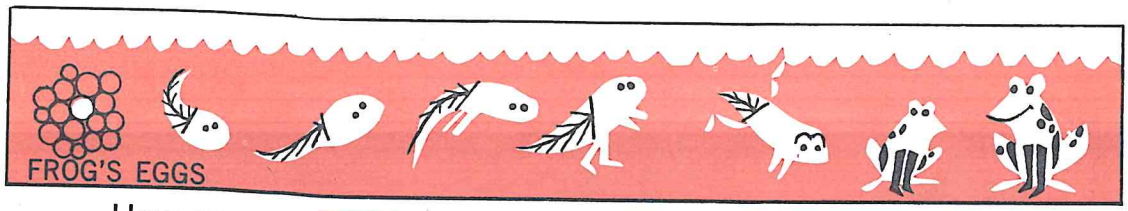
Which box has the most eggs?
Which box has the fewest?



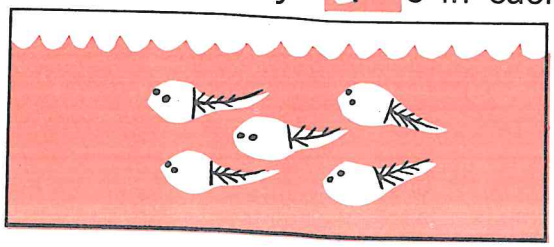
1 2 3 4 5 6 7 8

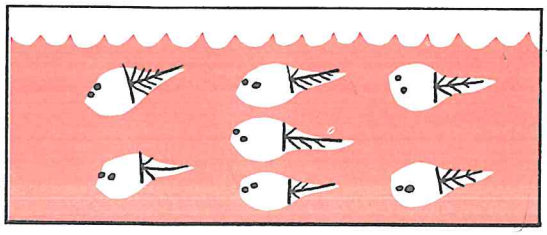
ALL ABOUT FROGS

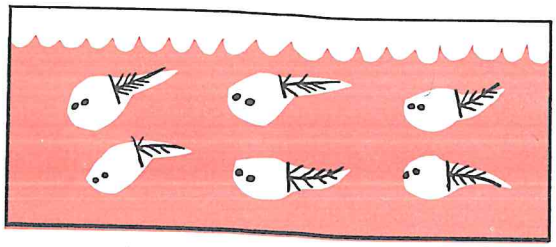
What does the first picture show?

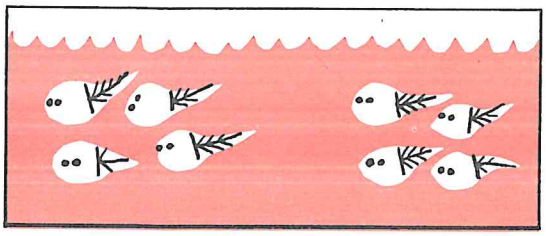


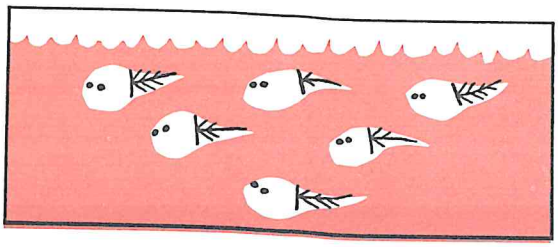
How many s in each tank?

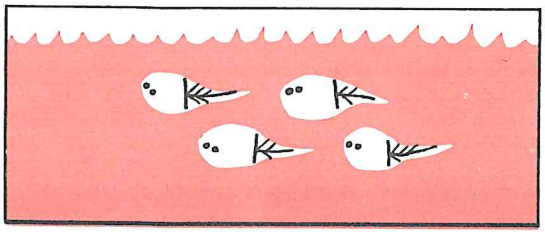


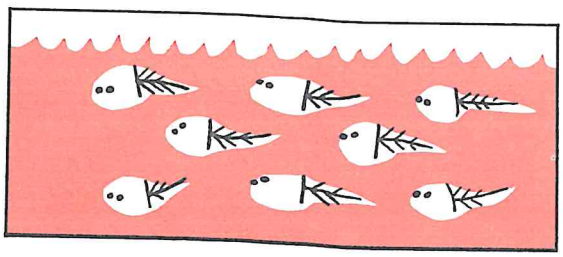


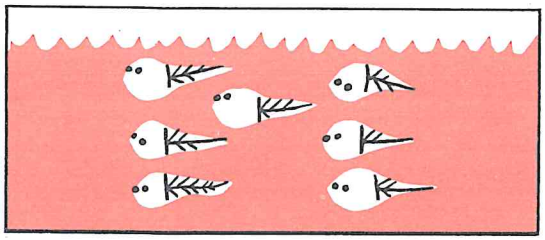






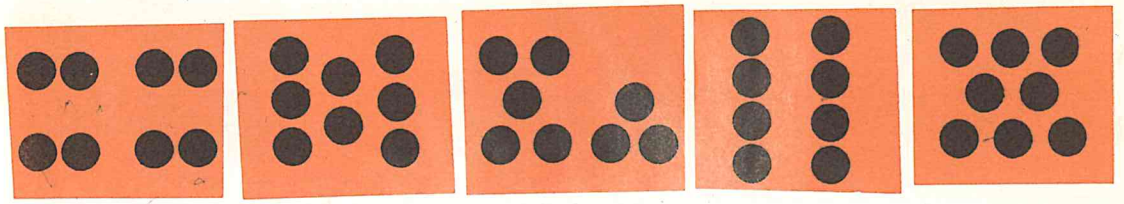




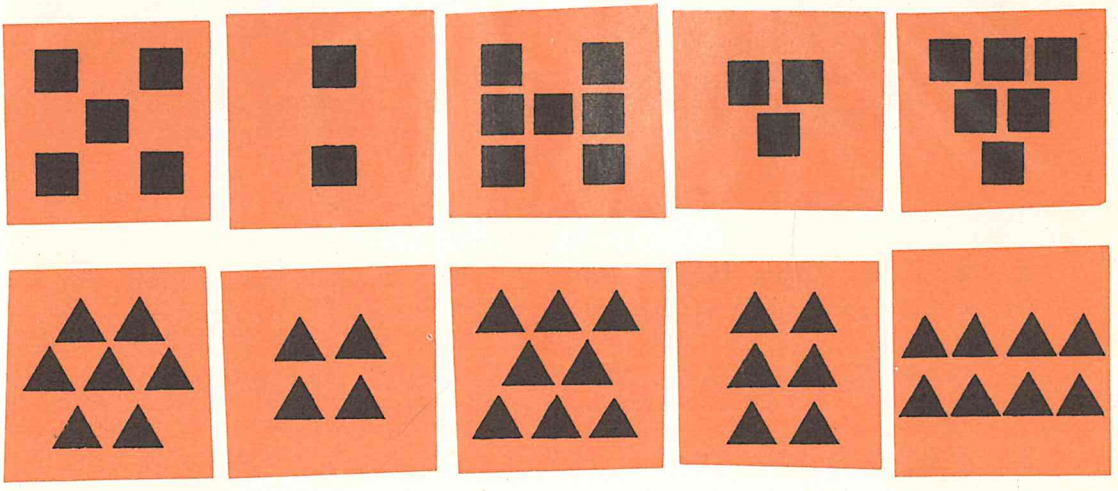


READING AND WRITING 8

How many in each picture in row 1?
Is there the same number in each?



Write a numeral for each picture in rows 2 and 3.



Find pictures for these numerals.

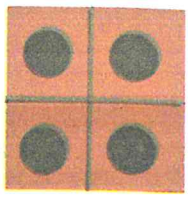
7 5 6 4 8

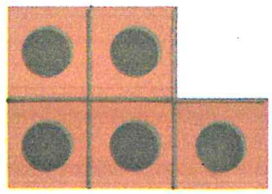
Write the missing numerals.

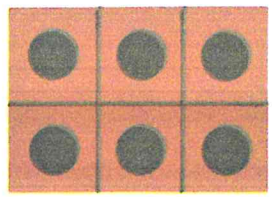
1		3		5		7	

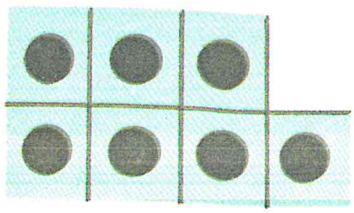
MORE OR LESS

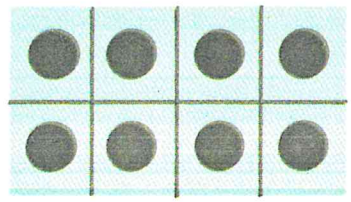
How many balls in each set?











1. 4 is ☐ less than 5.
7 is ☐ more than 6.
6 is ☐ less than 8.

4 is ☐ less than 6.
7 is ☐ more than 5.
8 is ☐ more than 7.

2. 3 and 5 are ☐.
2 and 2 are ☐.
1 and 7 are ☐.
1 and 6 are ☐.

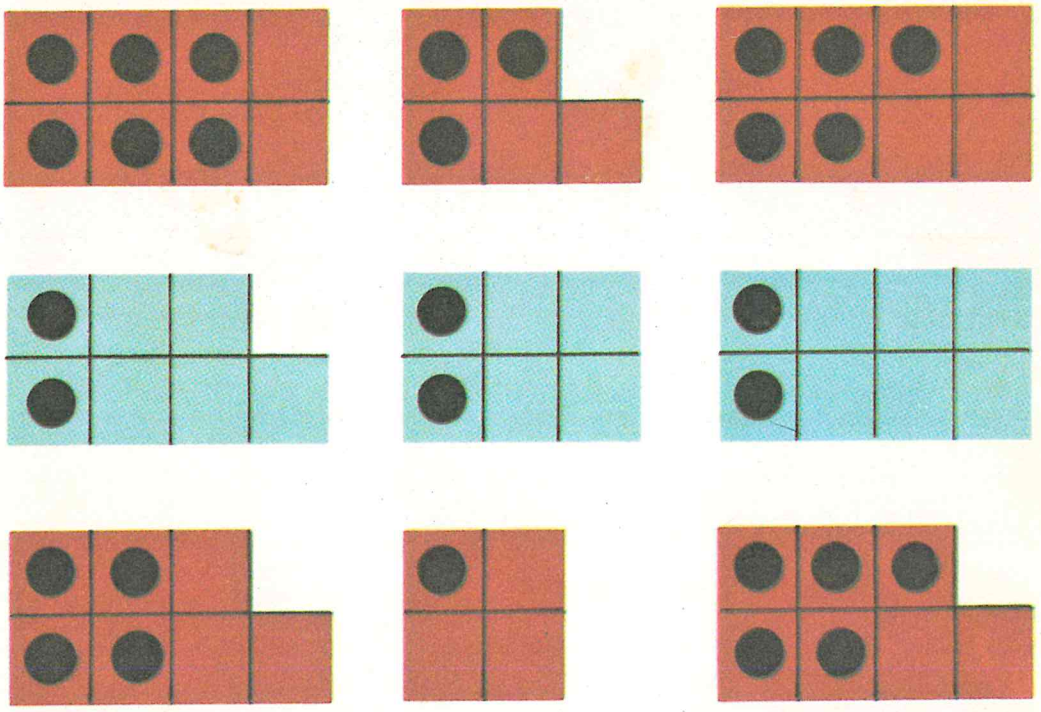
4 and 1 are ☐.
2 and 3 are ☐.
4 and 3 are ☐.
2 and 5 are ☐.

3. 7 take away 6 is ☐.
4 take away 3 is ☐.
8 take away 5 is ☐.
6 take away 5 is ☐.

8 take away 7 is ☐.
7 take away 4 is ☐.
5 take away 4 is ☐.
5 take away 3 is ☐.

HOW MANY MORE ARE NEEDED?

How many balls in each set?
How many are missing in each?



1.

3 and ■ are 5.
5 and ■ are 8.
5 and ■ are 7.
2 and ■ are 8.

2 and ■ are 6.
6 and ■ are 8.
1 and ■ are 4.
4 and ■ are 6.

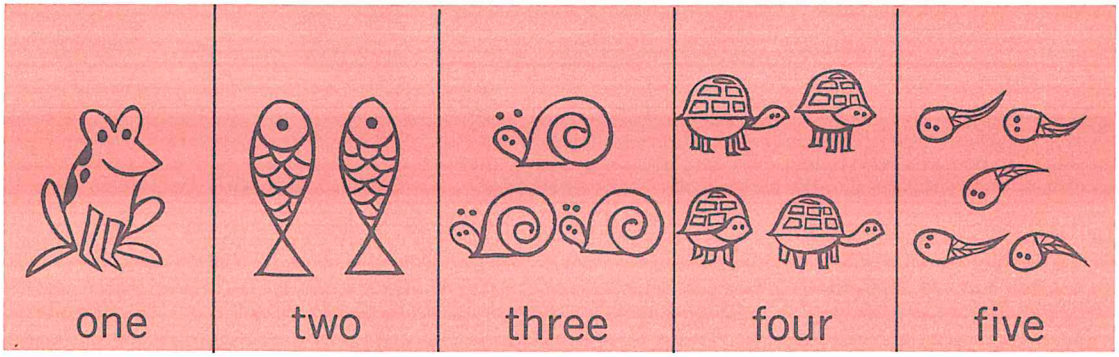
2.

7 take away 2 is ■.
6 take away 4 is ■.
8 take away 3 is ■.
7 take away 5 is ■.

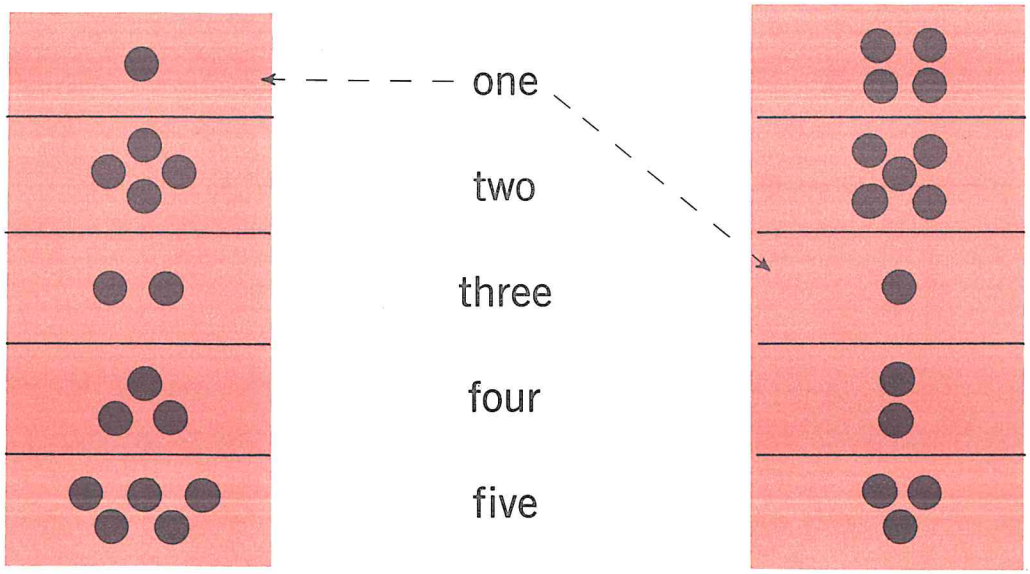
8 take away 6 is ■.
7 take away 3 is ■.
8 take away 2 is ■.
6 take away 2 is ■.

NUMBER NAMES

Read each word. Use the pictures to help.



Are the words below in the correct order?
Find two pictures for each word.
Use the boxes at the left and right.

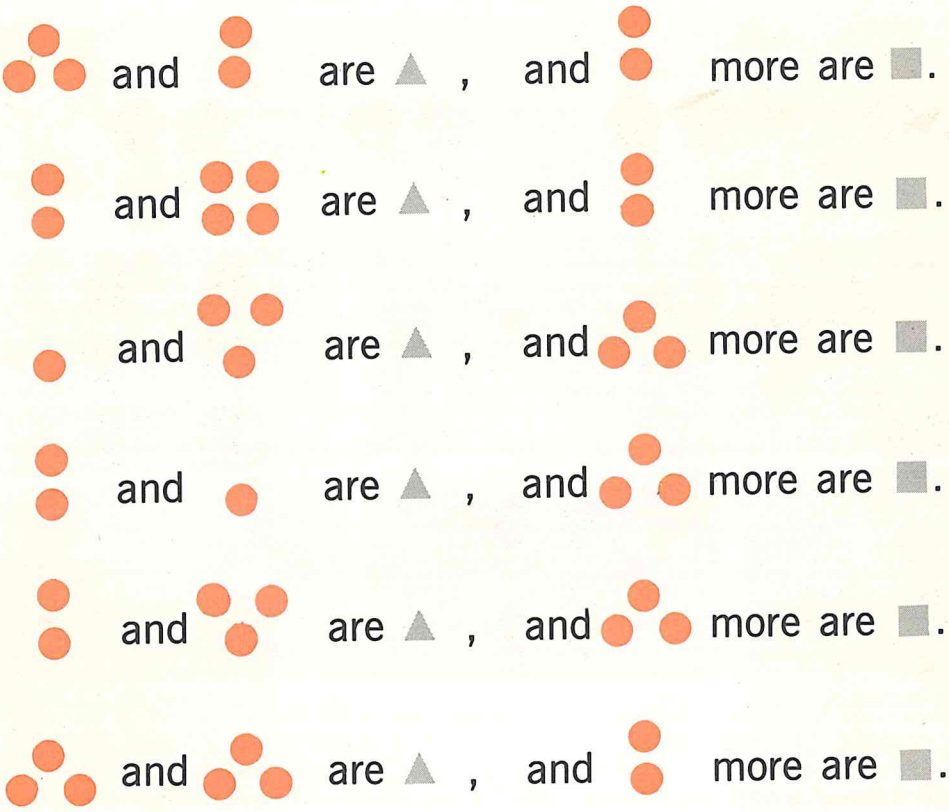


Read these words in proper order.

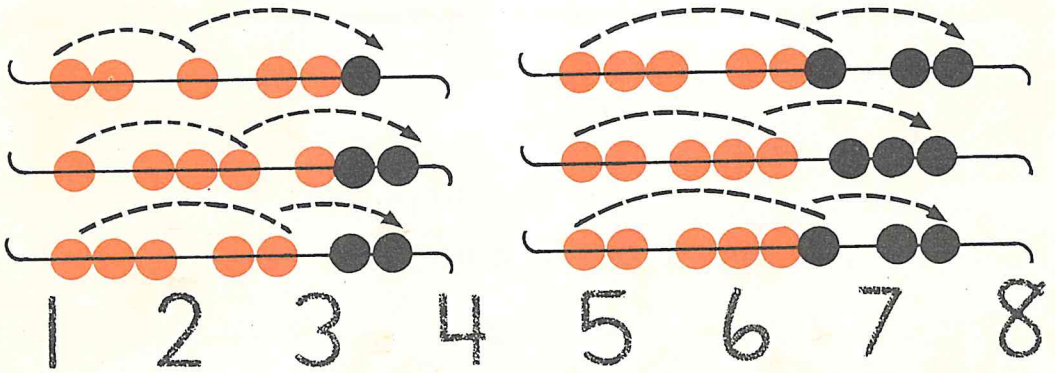
four two five one three

PUT TOGETHER THREE NUMBERS

Tell a number story for each row.

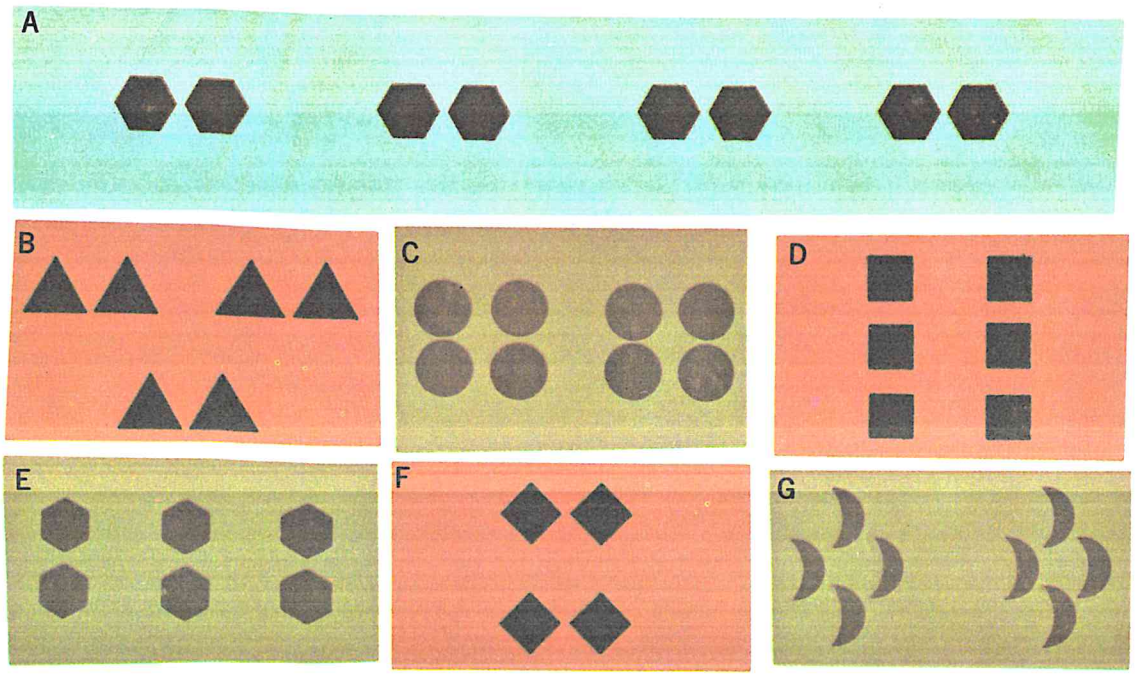


Tell a number story for each bead line.
Find a picture above for each bead line.



COUNTING

How many in each box? How did you count?



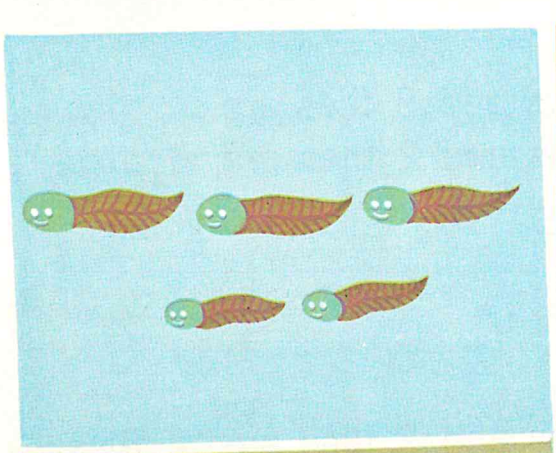
1. 2 and 2 are ▢.
   2 twos are ▢.
   4 and 4 are ▢.
   2 and 2 and 2 are ▢.
   3 and 3 are ▢.
   2 threes are ▢.

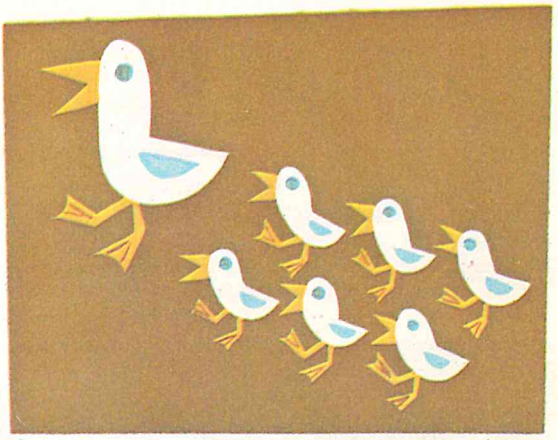
2. 4 twos are ▢.
   2 fours are ▢.
   3 twos are ▢.
   ▢ threes are 6.
   ▢ twos are 4.
   ▢ twos are 8.

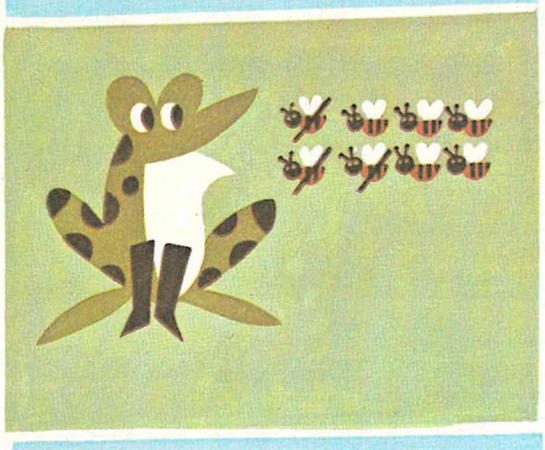
3. ▢ twos are 6.
   1 two is ▢.
   ▢ fours are 8.
   1 four is ▢.
   2 and 2 and 2 and 2 are ▢.

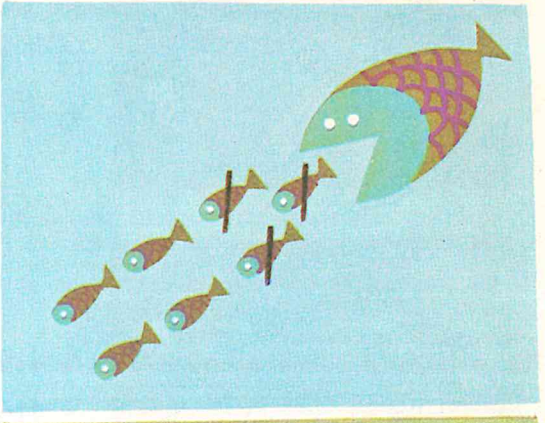
PROBLEM SOLVING

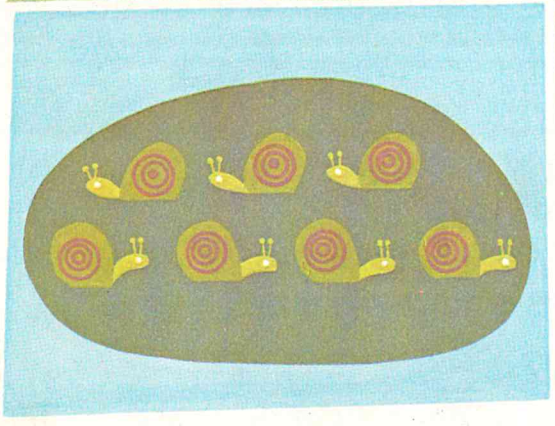
Tell a number story for each picture.

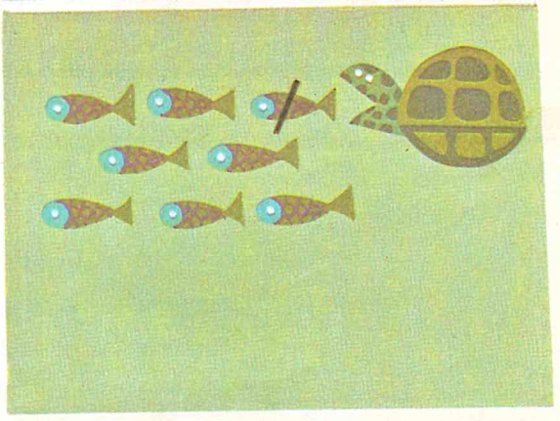






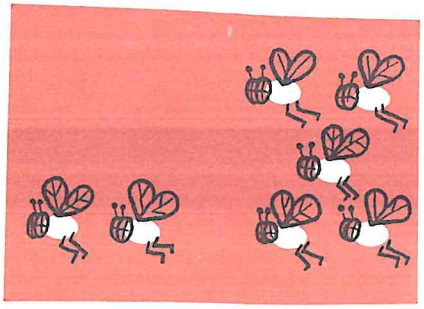






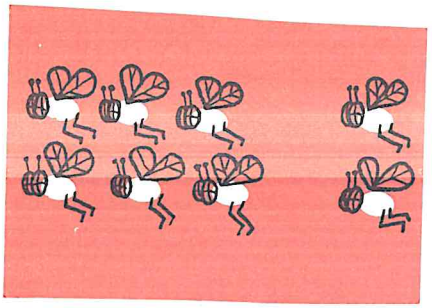
A SIGN FOR "AND"

and +



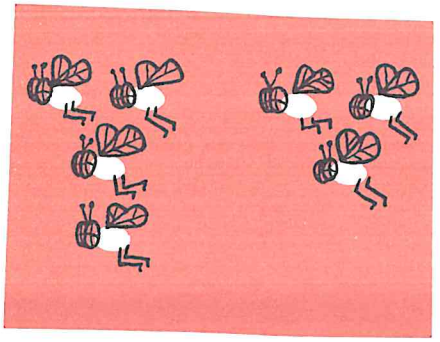
2 flies and 5 flies are ▢ flies.
5 flies and 2 flies are ▢ flies.

2 + 5 5 + 2



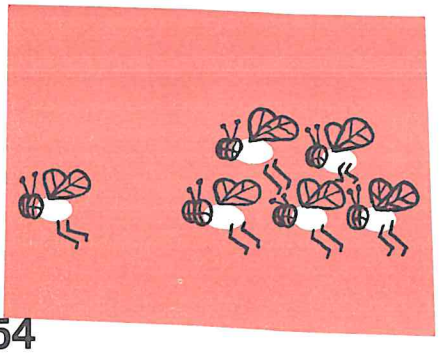
6 flies and 2 flies are ▢ flies.
2 flies and 6 flies are ▢ flies.

6 + 2 2 + 6



4 flies and 3 flies are ▢ flies.
3 flies and 4 flies are ▢ flies.

4 + 3 3 + 4



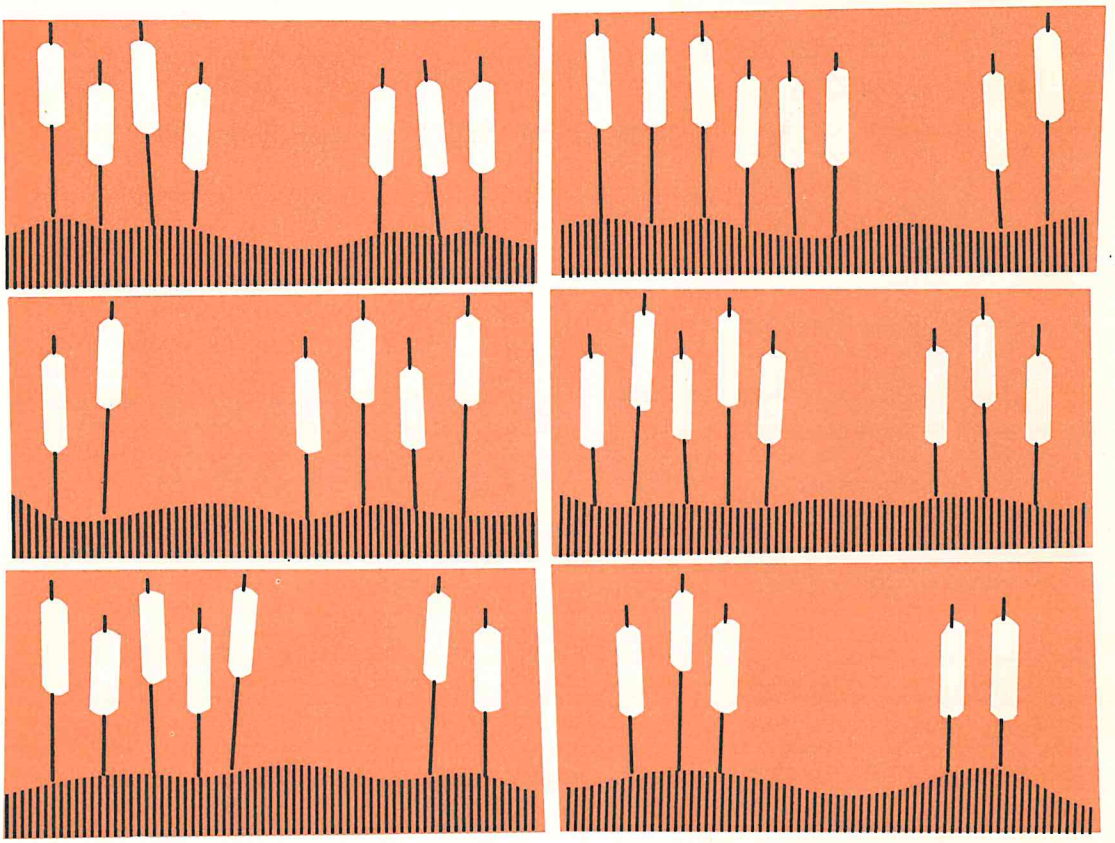
1 fly and 5 flies are ▢ flies.
5 flies and 1 fly are ▢ flies.

1 + 5 5 + 1

4 5 6 7 8

PUT-TOGETHER STORIES

Tell two number stories for each picture.

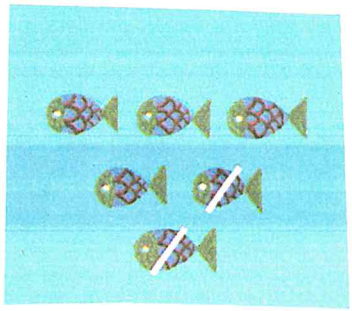


1.	6 + 2	3 + 4	5 + 2
	2 + 3	4 + 2	2 + 6
	5 + 3	2 + 5	4 + 3
2.	3 + 2	2 + 6	4 + 2
	5 + 2	2 + 4	5 + 3
	4 + 3	3 + 5	6 + 2

4 5 6 7 8

A SIGN FOR "TAKE AWAY"

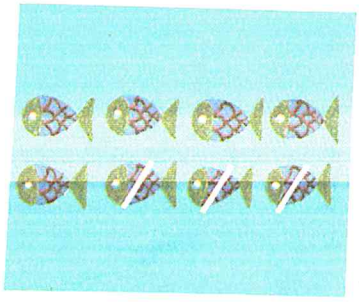
take away −



6 fish take away 2 fish is ▢ fish.

Cover 4. 6 take away 4 is ▢.

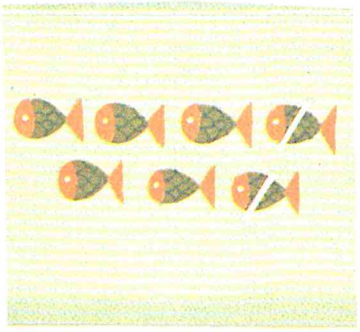
6 − 2 6 − 4



8 fish take away 3 fish is ▢ fish.

Cover 5. 8 take away 5 is ▢.

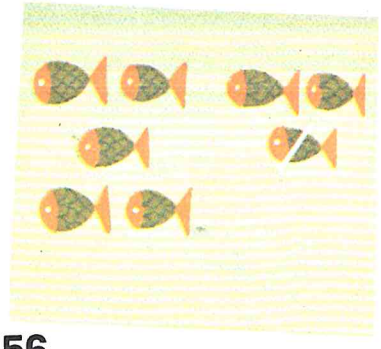
8 − 3 8 − 5



7 fish take away 2 fish is ▢ fish.

Cover 5. 7 take away 5 is ▢.

7 − 2 7 − 5



8 fish take away 1 fish is ▢ fish.

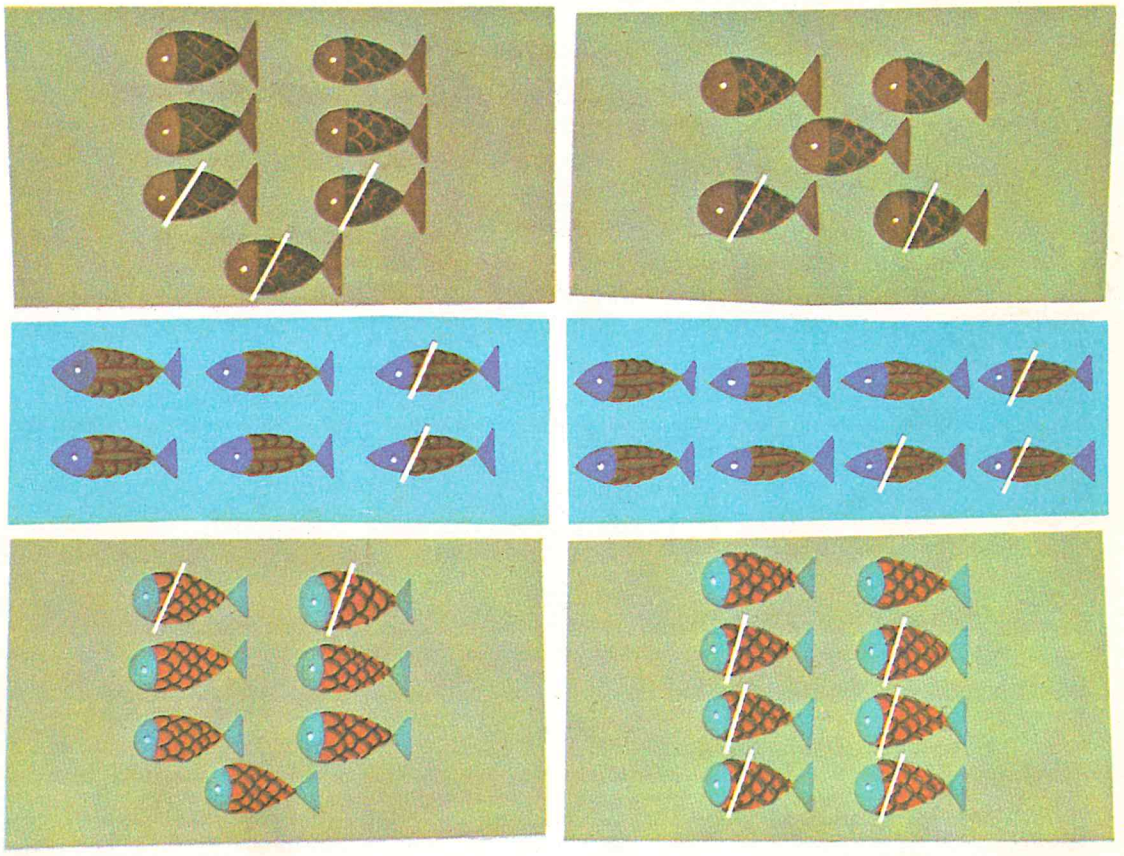
Cover 7. 8 take away 7 is ▢.

8 − 1 8 − 7

1 2 3 4 5 6 7

TAKE-AWAY STORIES

Tell a number story for each picture.



1. 6 − 2
7 − 3
8 − 3

2. 6 − 4
7 − 2
8 − 2

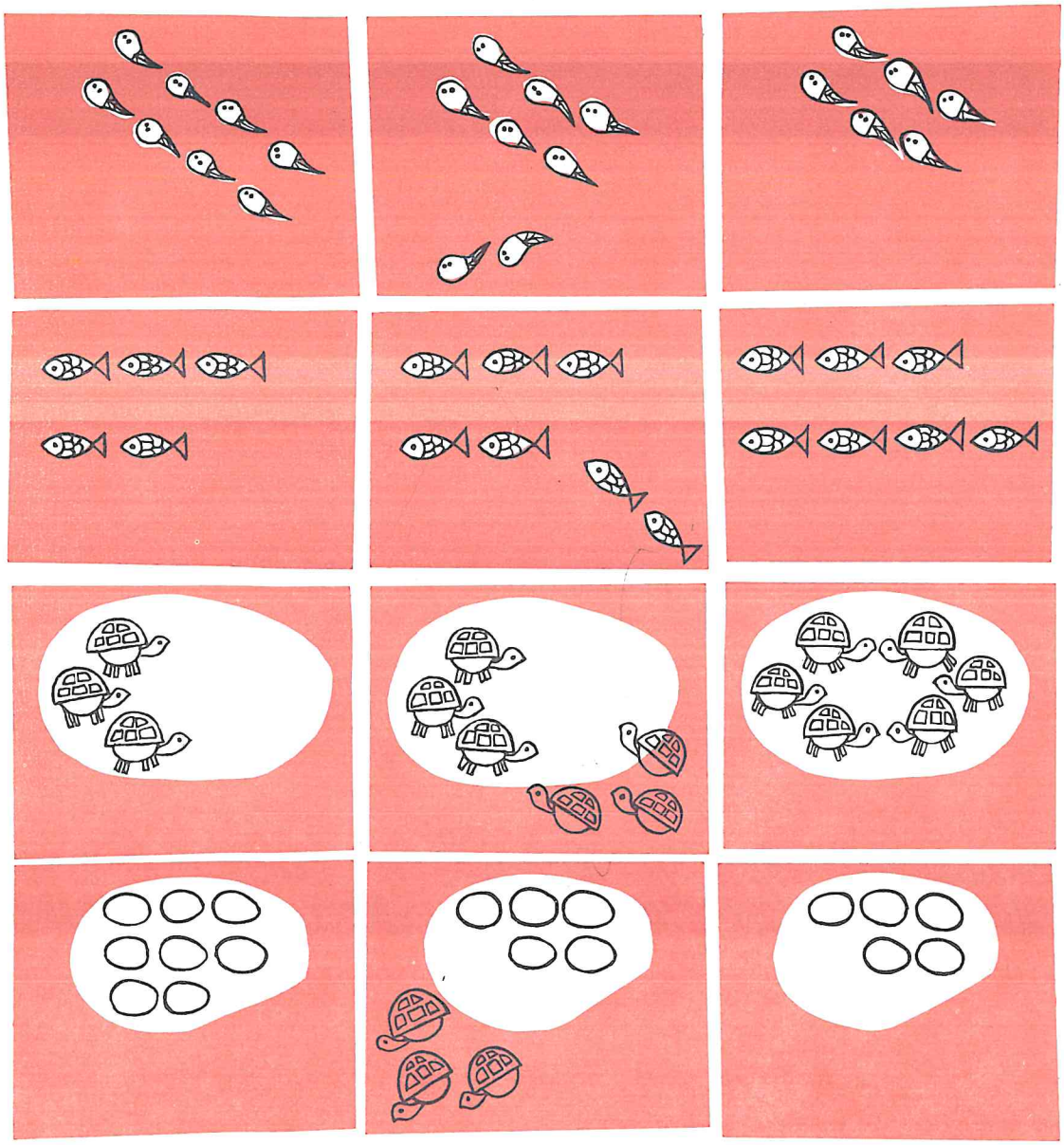
8 − 6
5 − 2
6 − 4
5 − 3
8 − 5
7 − 4

5 − 3
8 − 5
7 − 5
8 − 6
6 − 2
5 − 2

1 2 3 4 5 6 7

PROBLEM SOLVING

Tell a number story for each row.
Write a number sentence for each row.



A SIGN FOR "ARE" AND "IS"

and	are
+	=

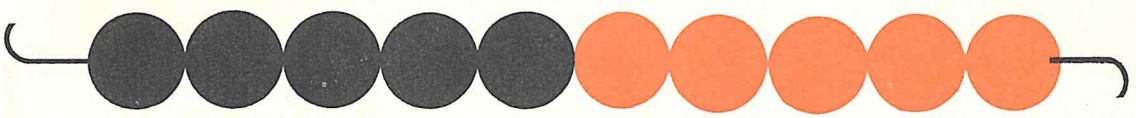
take away	is
−	=

2 and 3 are ■.
2 + 3 = ■
4 and 2 are ■.
4 + 2 = ■

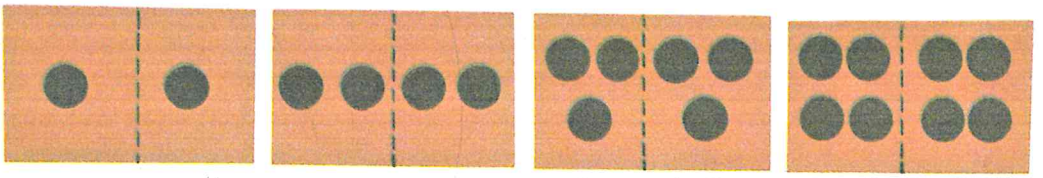
8 take away 4 is ■.
8 − 4 = ■
5 take away 2 is ■.
5 − 2 = ■

Use the bead line to help you find the answers.

1.	6 + 1 = ■	8 − 3 = ■	2 + 4 = ■
	7 − 3 = ■	1 + 4 = ■	5 − 3 = ■
2.	3 + 5 = ■	7 − 6 = ■	6 − 2 = ■
	2 + 2 = ■	8 − 2 = ■	2 + 5 = ■
3.	8 − 5 = ■	5 + 2 = ■	4 − 3 = ■
	3 + 2 = ■	7 − 4 = ■	8 − 6 = ■
4.	3 + 4 = ■	8 − 7 = ■	6 + 2 = ■
	6 − 4 = ■	3 + 3 = ■	7 − 2 = ■
5.	2 + 6 = ■	7 − 5 = ■	4 + 3 = ■
	5 − 4 = ■	5 + 3 = ■	6 − 5 = ■



THE DOUBLES



1 and 1
2 ones

2 and 2
2 twos

3 and 3
2 threes

4 and 4
2 fours

1.

$2 + 2 =$ ▢ $6 - 3 =$ ▢ $1 + 1 =$ ▢

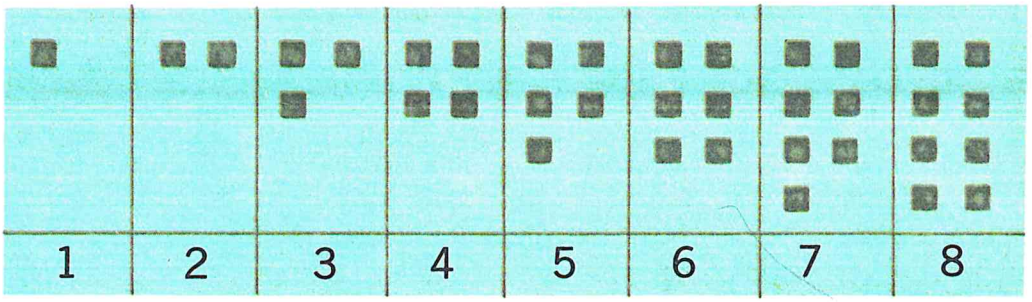
$8 - 4 =$ ▢ $2 - 1 =$ ▢ $4 + 4 =$ ▢

2.

$4 - 2 =$ ▢ 2 ones = ▢ $3 + 3 =$ ▢

2 fours = ▢ 2 twos = ▢ 2 threes = ▢

WORKING WITH ONE



1	2	3	4	5	6	7	8

1.

$4 + 1 =$ ▢ $1 + 4 =$ ▢ $4 - 1 =$ ▢

$6 + 1 =$ ▢ $1 + 6 =$ ▢ $6 - 1 =$ ▢

2.

$3 + 1 =$ ▢ $1 + 3 =$ ▢ $3 - 1 =$ ▢

$5 + 1 =$ ▢ $1 + 5 =$ ▢ $5 - 1 =$ ▢

3.

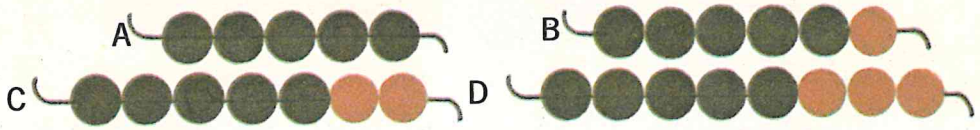
$7 + 1 =$ ▢ $1 + 7 =$ ▢ $7 - 1 =$ ▢

$2 + 1 =$ ▢ $1 + 2 =$ ▢ $2 - 1 =$ ▢

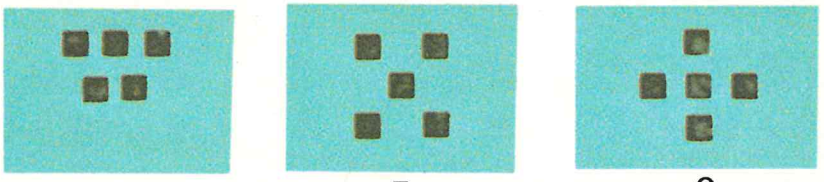
$1 + 1 =$ ▢ $8 - 1 =$ ▢

PRACTICE

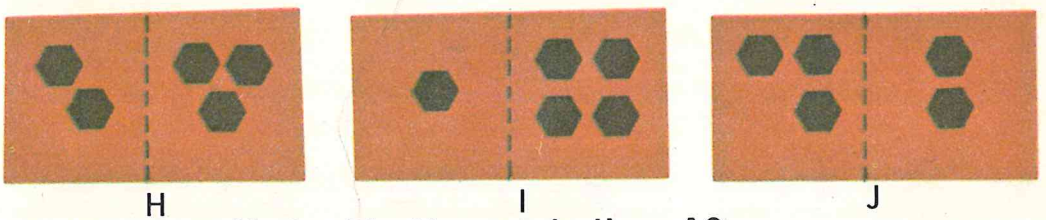
1. How many on each bead line?



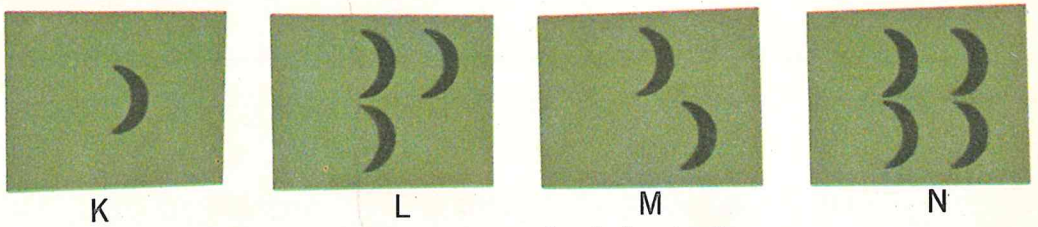
2. Do sets E, F, G match line A one to one?
   Draw sets to match lines B, C, D.



3. Do the pairs of sets in H, I, J match line A?
   Draw pairs of sets to match lines B, C, D.

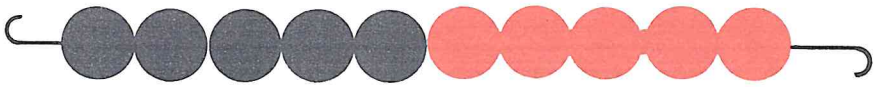


4. Do sets K, L, M, N match line A?
   How many more are needed in each set?



5. How many more are needed in sets
   K, L, M, N to match lines B, C, D?

DO YOU REMEMBER?



Use the bead line to help you find the answers.

1.

2 + 4 = ☐	6 + 2 = ☐	5 − 2 = ☐
5 − 4 = ☐	7 − 2 = ☐	5 + 3 = ☐

2.

3 + 2 = ☐	4 − 3 = ☐	8 − 2 = ☐
2 + 6 = ☐	8 − 3 = ☐	5 + 2 = ☐

3.

7 − 6 = ☐	5 − 3 = ☐	6 − 4 = ☐
4 + 3 = ☐	7 − 5 = ☐	2 + 3 = ☐

4.

6 − 5 = ☐	4 + 2 = ☐	7 − 4 = ☐
3 + 5 = ☐	8 − 4 = ☐	8 − 6 = ☐

5.

3 + 4 = ☐	8 − 7 = ☐	2 + 5 = ☐
6 − 2 = ☐	7 − 3 = ☐	8 − 5 = ☐

6.

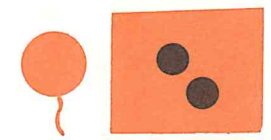
☐ + 4 = 7	5 + ☐ = 8	8 − ☐ = 2
6 = ☐ + 4	7 = ☐ + 5	4 = ☐ + 3
8 = ☐ fours	4 = ☐ twos	6 = ☐ threes

7. and are △, and more are ☐.

8. and are △, and more are ☐.

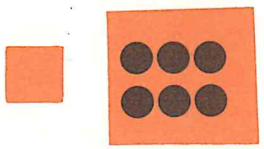
ENRICHMENT

How many? How many in all? Name the new sets.

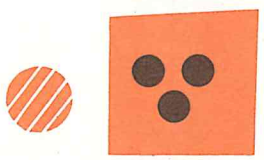


and make ? Two s make ?

2 and 3 are 5. Two twos are 4.

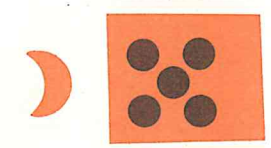


and make . Two s make .



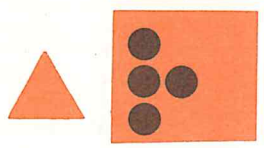
and make ? Two s make ?

and make ? Three s make ?

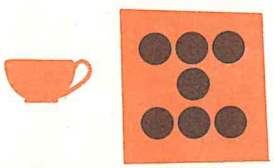


and make ? One makes ?

and make ? Four s make ?

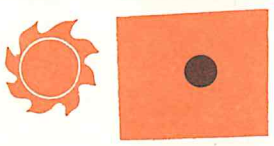


and make ? Four s make ?



and make ? One makes ?

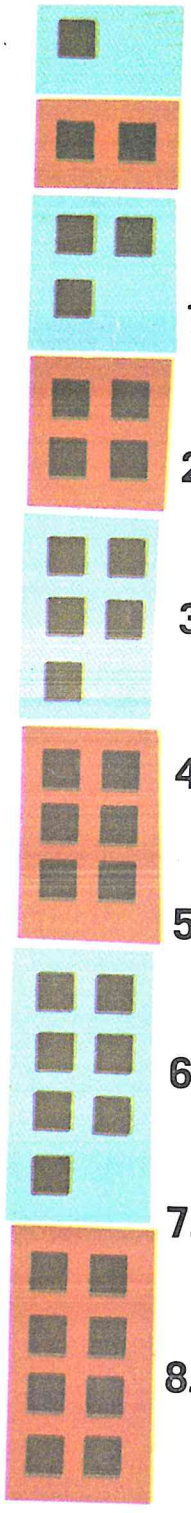
and make ? Two s make ?



and and make ?

and and make ?

and and make ?



MORE PRACTICE

How many ■ s in each box?
Use the pictures to help you find answers.

1.

3 + 4 = ▲	2 + 5 = ▲	4 + 4 = ▲
6 + 2 = ▲	2 + 3 = ▲	7 + 1 = ▲

2.

3 + ▲ = 8	1 + ▲ = 7	2 + ▲ = 8
3 + ▲ = 6	2 + ▲ = 4	5 + ▲ = 7

3.

6 − 4 = ▲	8 − 6 = ▲	7 − 2 = ▲
8 − 3 = ▲	7 − 4 = ▲	5 − 3 = ▲

4.

7 − ▲ = 4	6 − ▲ = 5	8 − ▲ = 6
6 − ▲ = 4	4 − ▲ = 2	8 − ▲ = 3

5.

7 = ▲ + 3	8 = 5 + ▲	6 = 2 + ▲
5 = ▲ + 2	4 = ▲ + 1	8 = 1 + ▲

6.

2 = ▲ − 5	1 = ▲ − 7	3 = ▲ − 3
4 = ▲ − 4	3 = ▲ − 2	6 = ▲ − 1

7.

3 twos = ▲	2 ones = ▲	4 twos = ▲
2 fours = ▲	2 threes = ▲	2 twos = ▲

8.

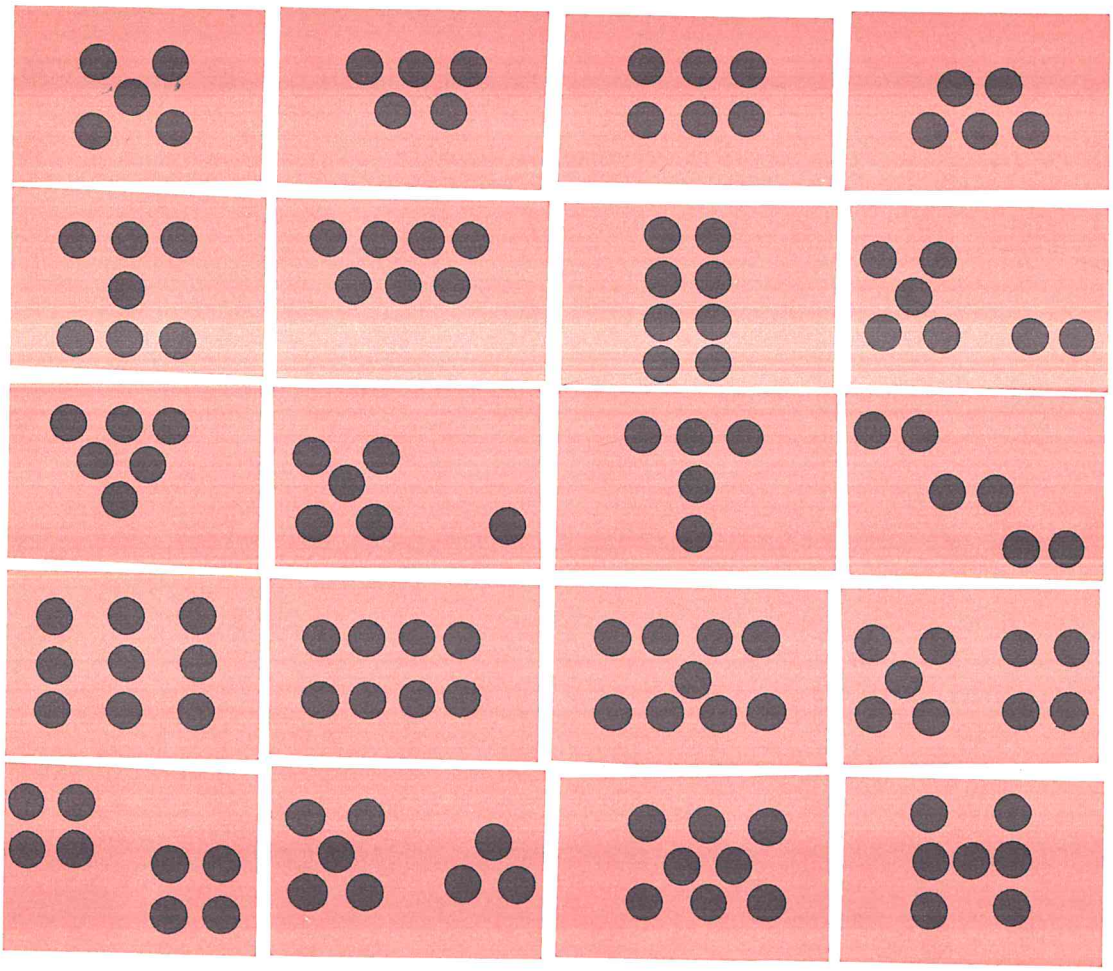
▲ fours = 8	▲ threes = 6	▲ twos = 6
▲ twos = 4	▲ twos = 8	▲ ones = 2

OWLS IN THE TREES

How many owls? How many in row 1?
How many in row 2? in rows 1 and 2?
How many owls in all? How do you know?
Cover some. Now how many?

HOW MANY IN EACH SET?

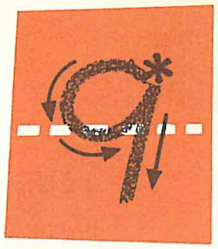
1. How many in each picture in row 1?
   Is there the same number in each?
2. How many in the pictures in rows 2-5?



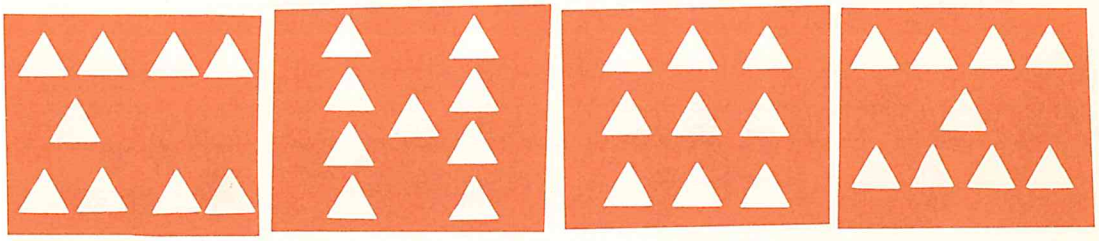
3. Find pictures for these numerals.

5 6 7 8 9

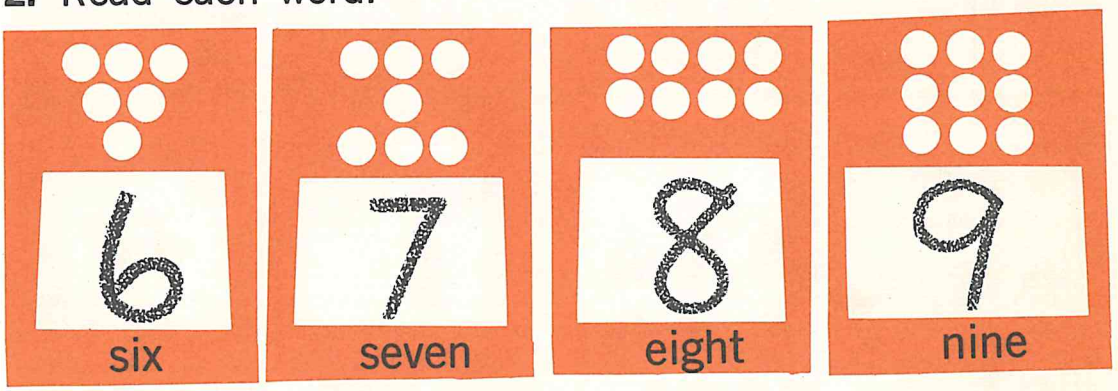
READING AND WRITING 9



1. How many in each picture?
   Write the numerals for each picture.



2. Read each word.



3. Match words, numerals, and pictures.

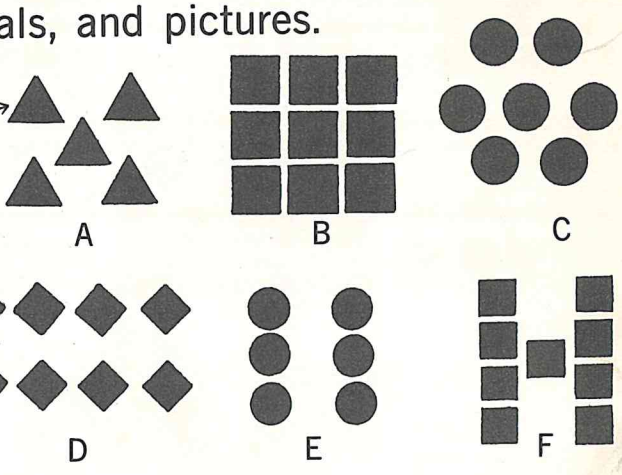
five 7

seven 5

eight 9

nine 6

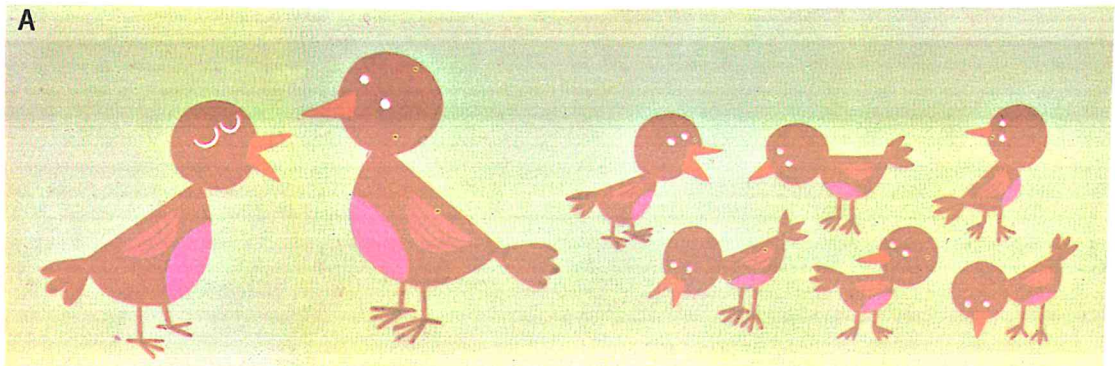
six 8



YOUR OWN NUMBER STORIES

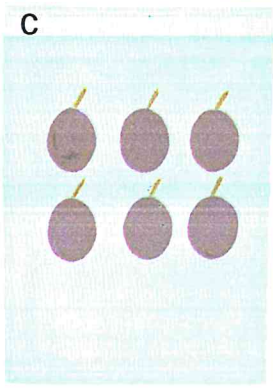
Tell how many are in each picture.
Make up number stories about the birds.
Write number sentences for your stories.

A

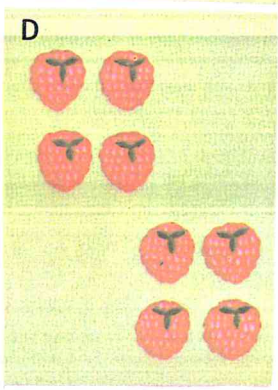


B

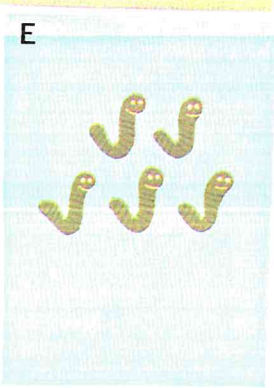
C



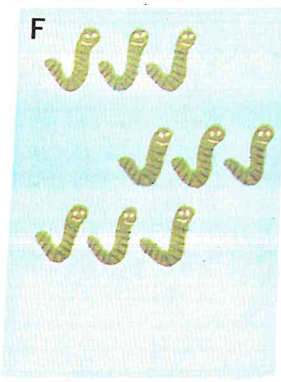
D



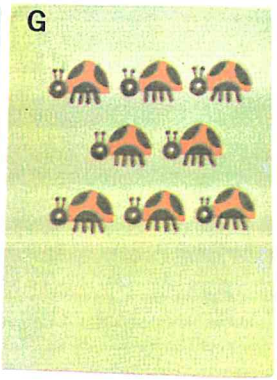
E



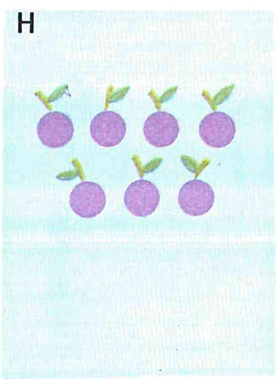
F



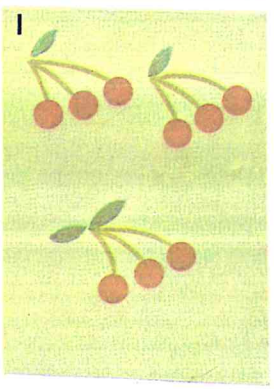
G



H



I



WHICH ONE?

1. How many branches?
2. Find the highest. Which one is it?
   Find the lowest. Which one?
3. What is on each branch?
4. On what branches are these?

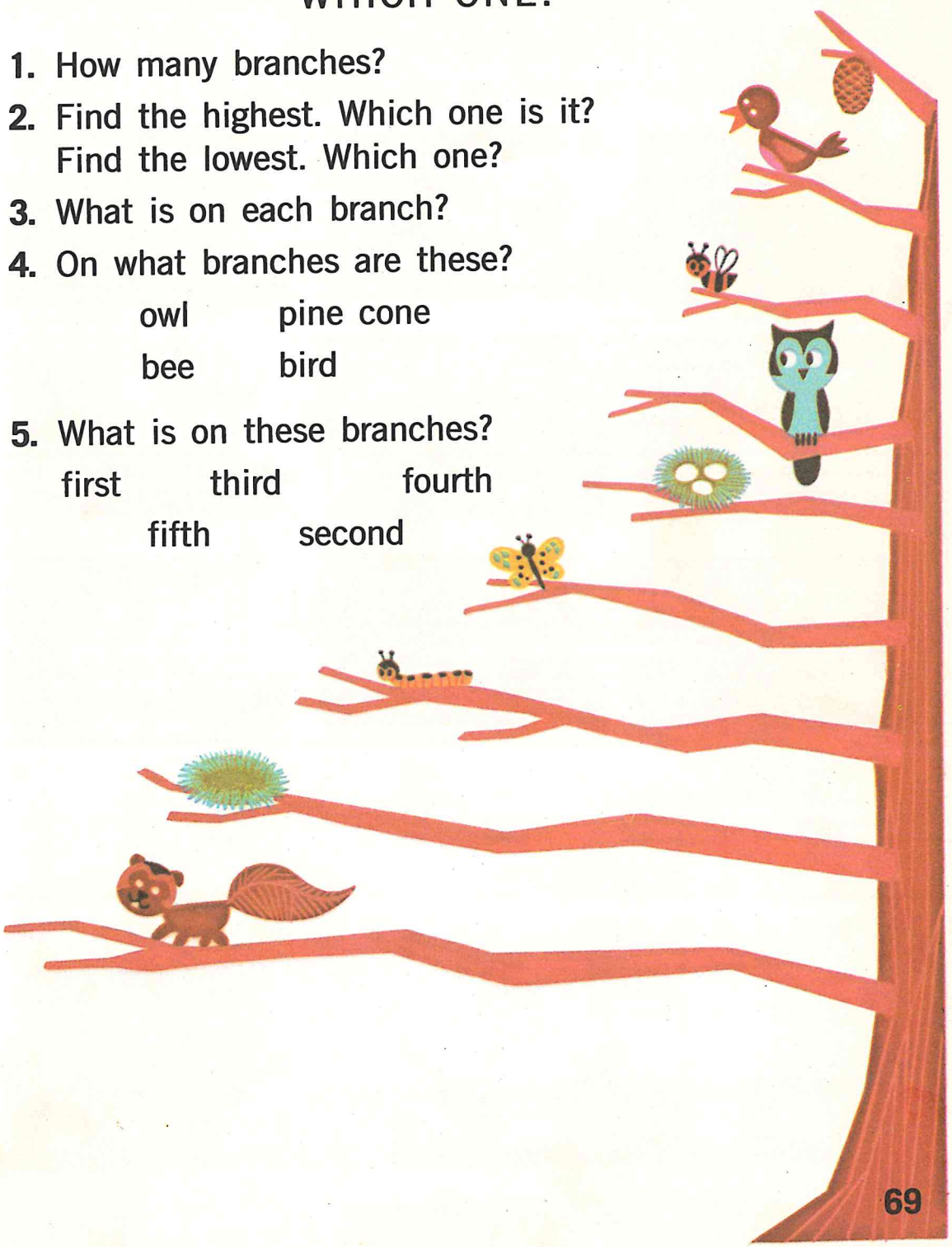
   owl pine cone

   bee bird

5. What is on these branches?

   first third fourth

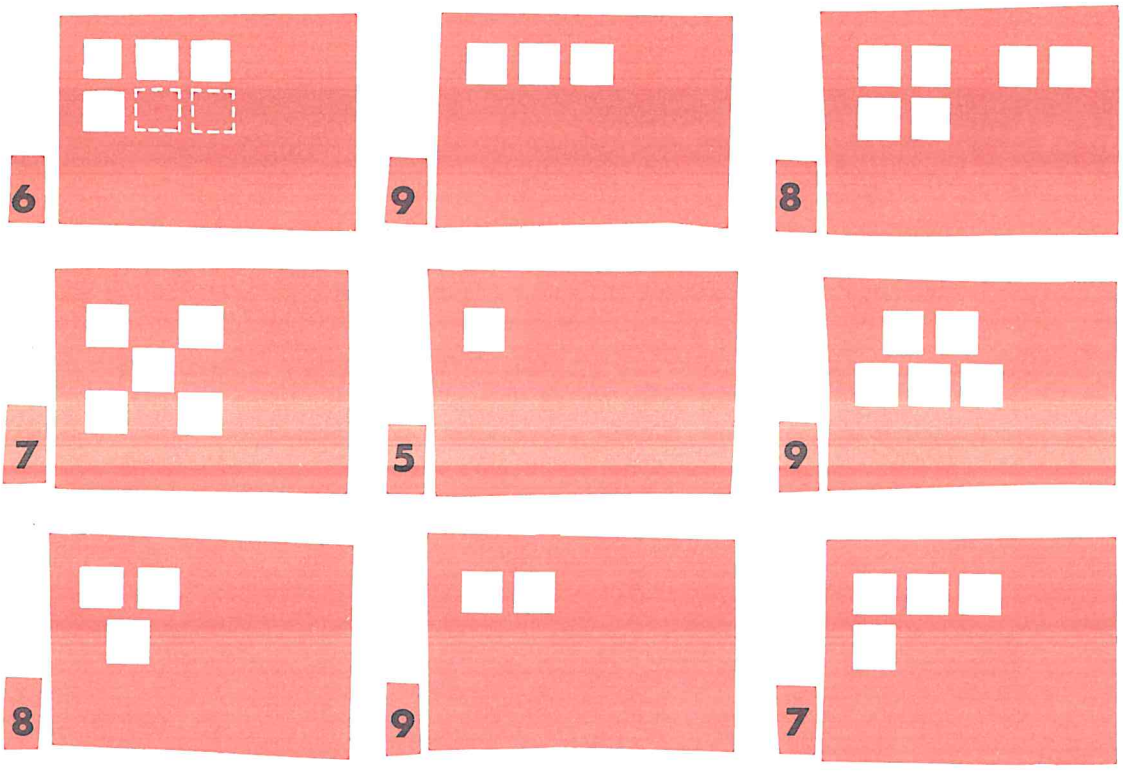
   fifth second



HOW MANY MORE DO YOU NEED?

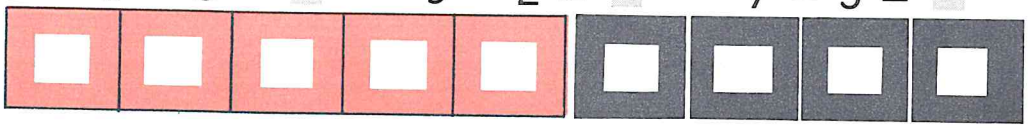
How many in each box?

How many more are needed in each?



Use the picture line to help you find answers.

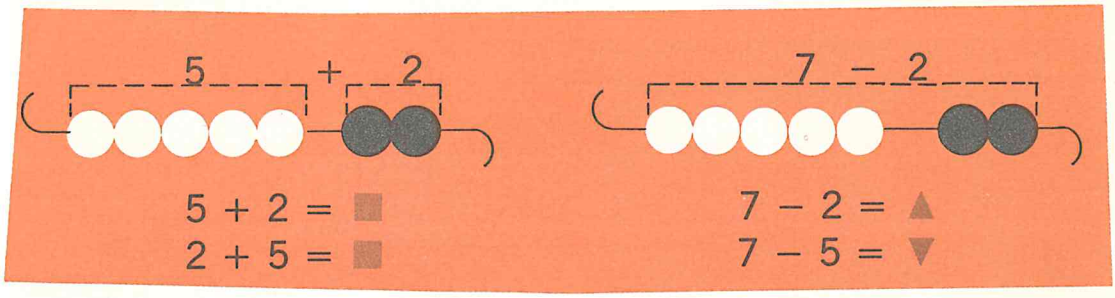
1.	3 + ▢ = 9	5 + ▢ = 7	4 + ▢ = 6
2.	4 + ▢ = 7	1 + ▢ = 5	3 + ▢ = 8
3.	2 + ▢ = 9	6 + ▢ = 8	5 + ▢ = 9
4.	8 − 3 = ▢	9 − 5 = ▢	6 − 4 = ▢
5.	9 − 3 = ▢	7 − 4 = ▢	5 − 1 = ▢
6.	8 − 6 = ▢	9 − 2 = ▢	7 − 5 = ▢

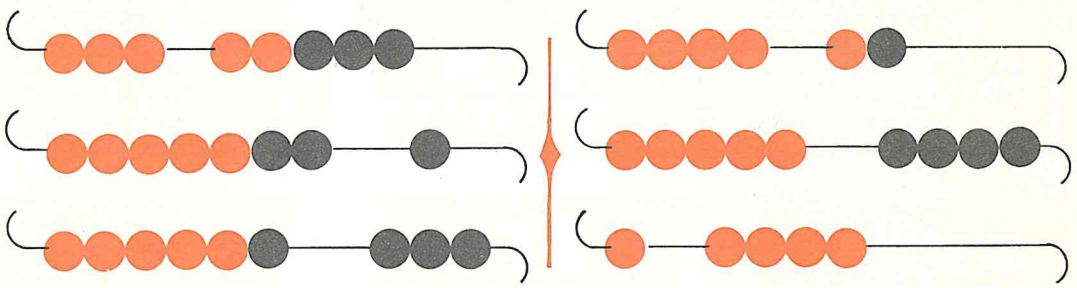


USING BEAD LINES

Tell put-together stories for each row.

Now tell take-away stories for each.





1.

4 + 2 = ■	6 + 3 = ■	1 + 4 = ■
3 + 5 = ■	7 + 1 = ■	5 + 4 = ■

2.

4 + 1 = ■	5 + 3 = ■	3 + 6 = ■
4 + 5 = ■	2 + 4 = ■	1 + 7 = ■

3.

8 − 1 = ■	9 − 3 = ■	5 − 1 = ■
9 − 5 = ■	6 − 2 = ■	8 − 5 = ■

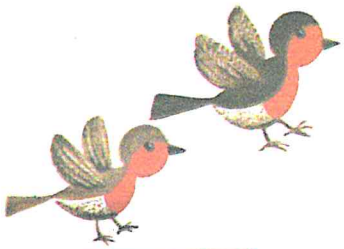
4.

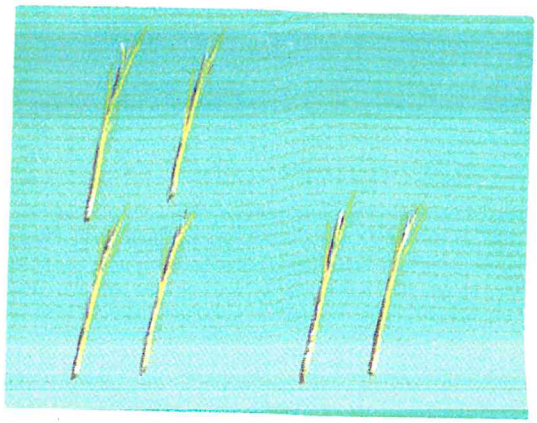
5 − 4 = ■	9 − 6 = ■	6 − 4 = ■
8 − 3 = ■	9 − 4 = ■	8 − 7 = ■

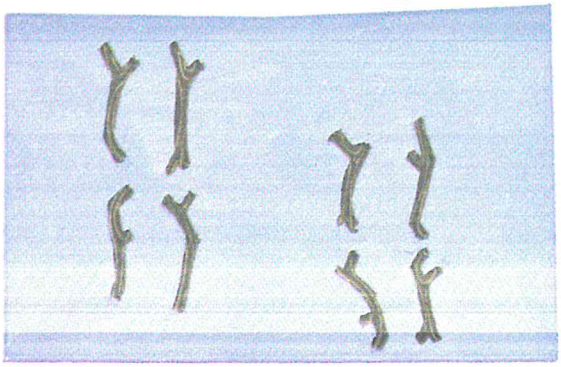
1 2 3 4 5 6 7 8 9

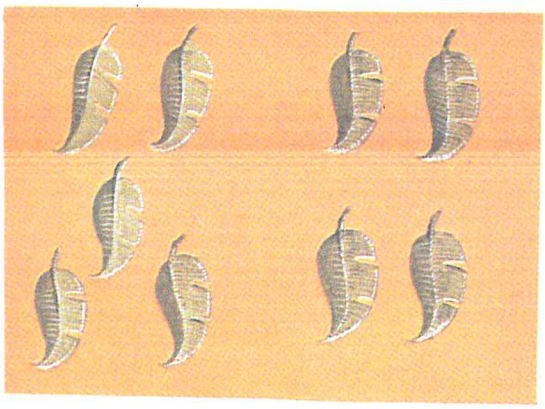
MORE NUMBER STORIES

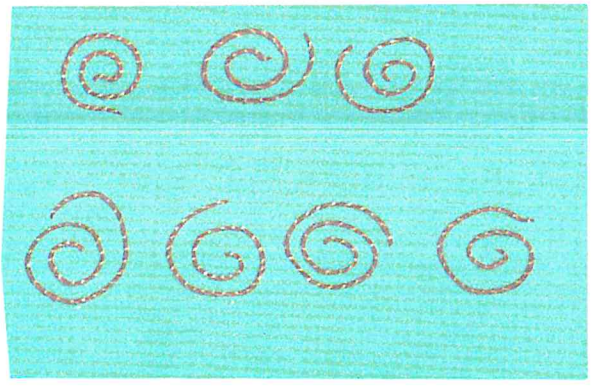
The birds are making a nest.
The pictures show things they use.
Tell number stories about the nest.







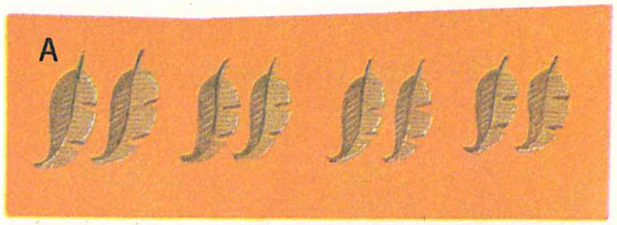


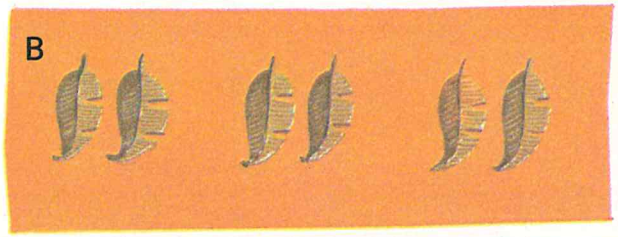


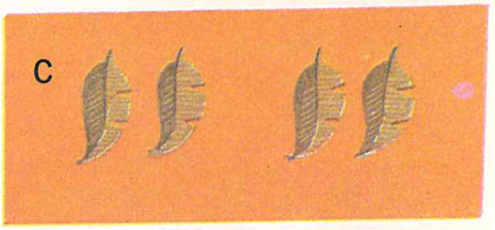
Tell number stories about these pictures.

COUNTING SETS

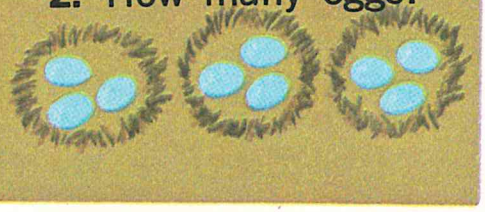
1. How many in A?
Count by 2's.
How many in B and C?



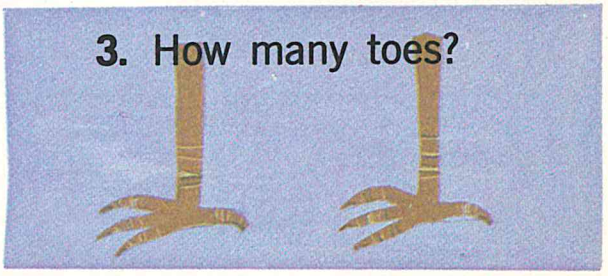




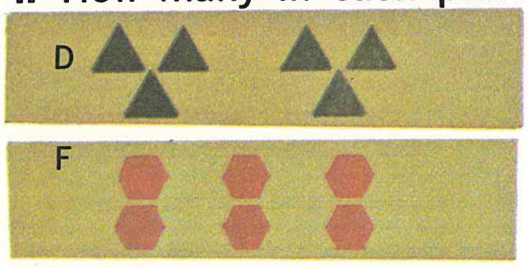
2. How many eggs?

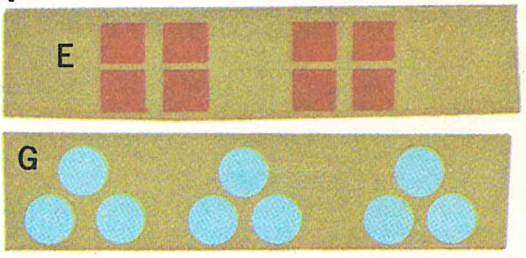


3. How many toes?



4. How many in each picture?





Use the pictures to help you find answers.

5. 2 threes = ■ 3 twos = ■ 2 fours = ■

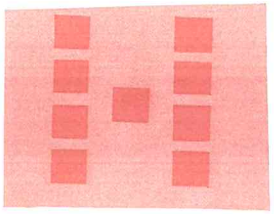
6. 3 threes = ■ 4 twos = ■ 2 twos = ■

7. ■ fours = 8 ■ twos = 6 ■ threes = 6

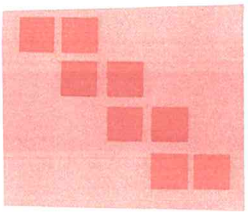
8. ■ twos = 4 ■ threes = 9 ■ twos = 8

HOW MANY IN ALL?

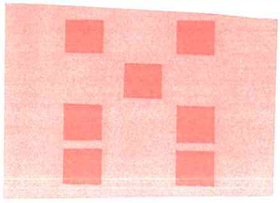
How many in each box? How do you know?
Use the pictures to help you find answers.



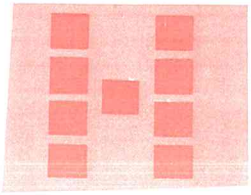
8 + 1 = ☐
1 + 8 = ☐



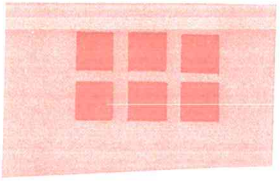
2 + 6 = ☐
6 + 2 = ☐



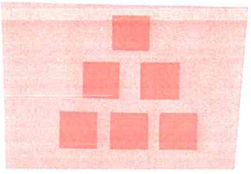
3 + 4 = ☐
4 + 3 = ☐



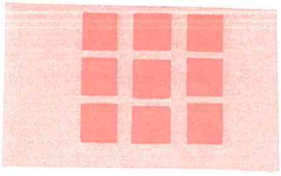
4 + 5 = ☐
5 + 4 = ☐



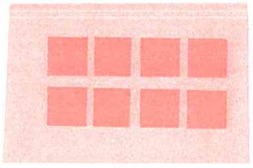
3 + 3 = ☐



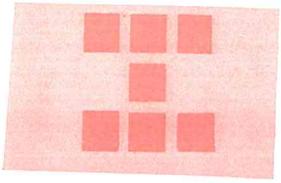
5 + 1 = ☐
1 + 5 = ☐



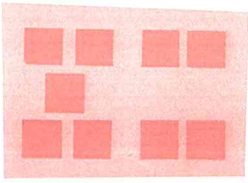
3 + 6 = ☐
6 + 3 = ☐



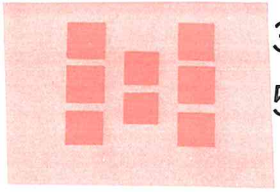
4 + 4 = ☐



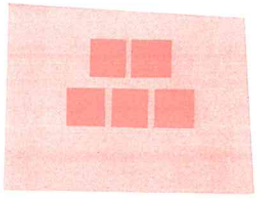
6 + 1 = ☐
1 + 6 = ☐



7 + 2 = ☐
2 + 7 = ☐



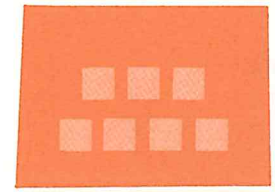
3 + 5 = ☐
5 + 3 = ☐



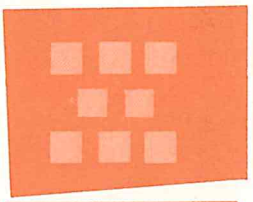
2 + 3 = ☐
3 + 2 = ☐

HOW MANY LEFT?

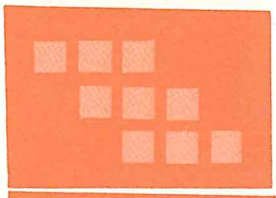
How many in each box? How do you know?
Use the pictures to help you find answers.



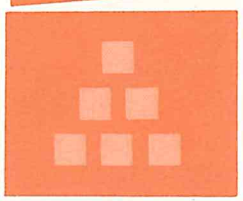
7 − 4 = ■
7 − 3 = ■



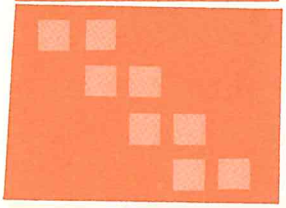
8 − 5 = ▲
8 − 3 = ▲



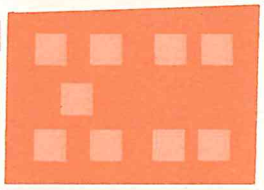
9 − 1 = ■
9 − 8 = ■



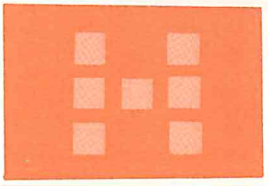
■ − 3 = ▲



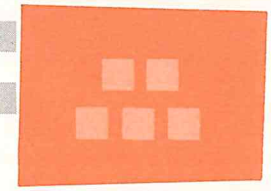
8 − 6 = ■
8 − 2 = ■



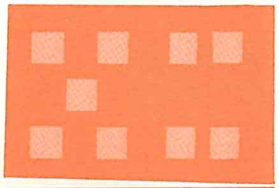
■ − 2 = ▲
■ − 7 = ▲



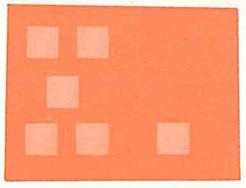
7 − 1 = ■
7 − 6 = ■



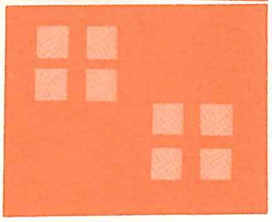
■ − 3 = ▲
■ − 2 = ▲



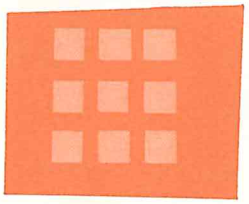
9 − 5 = ■
9 − 4 = ■



■ − 1 = ▲
■ − 5 = ▲



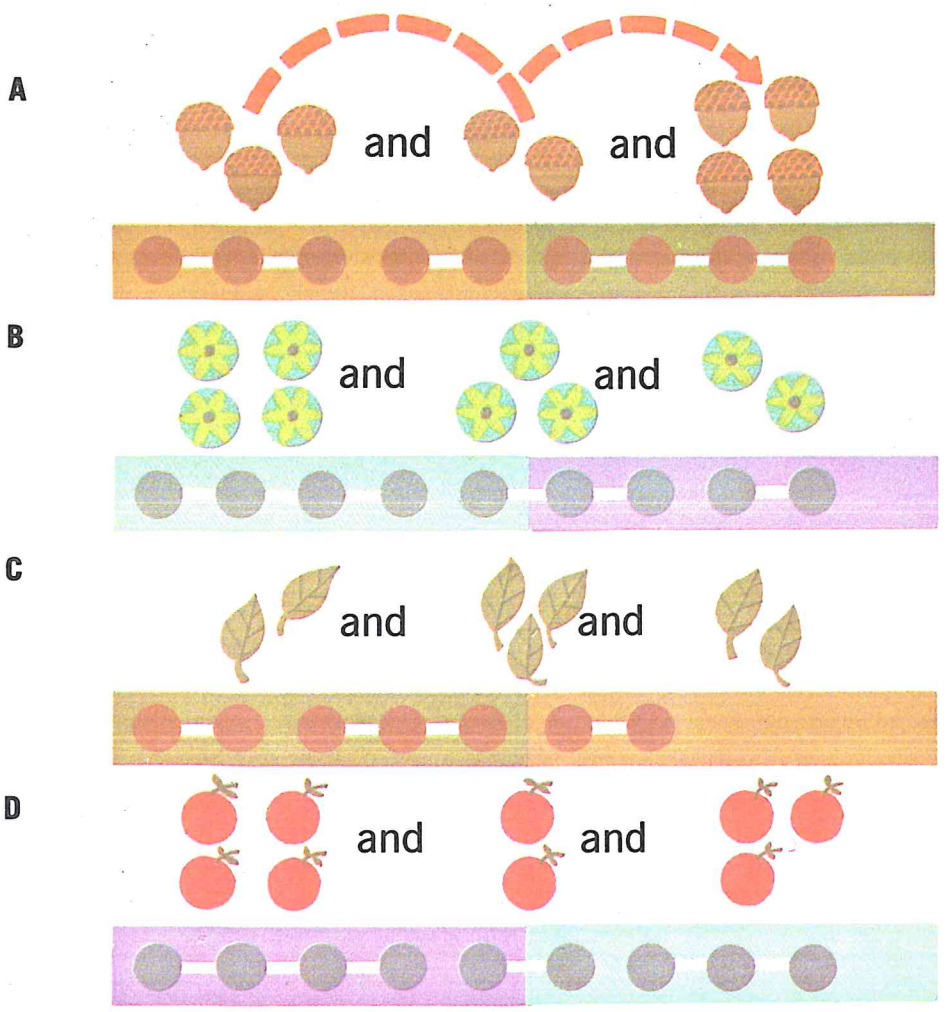
8 − 4 = ■



■ − 6 = ▲
■ − 3 = ▲

THINK THREE NUMBERS TOGETHER

Tell a number story for each row.

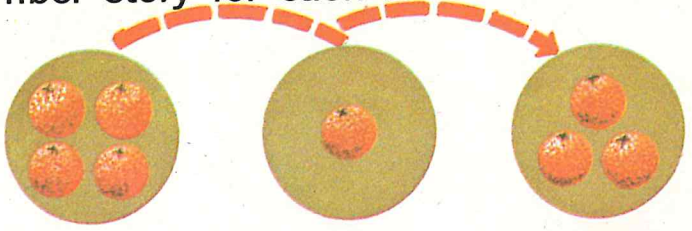


1. 4 and 2 are ▲, and 3 more are ■.
2. 3 and 2 are ▲, and 4 more are ■.
3. 4 and 3 are ▲, and 2 more are ■.
4. 2 and 3 are ▲, and 2 more are ■.

MORE ABOUT NUMBERS TOGETHER

Tell a number story for each row.

A



4 and 1 are ▲, and 3 more are ■.

$4 + 1 = ▲$, $▲ + 3 = ■$ $\qquad$ $4 + 1 + 3 = ■$

B

2 and 5 are ▲, and 2 more are ■.

$2 + 5 = ▲$, $▲ + 2 = ■$ $\qquad$ $2 + 5 + 2 = ■$

C

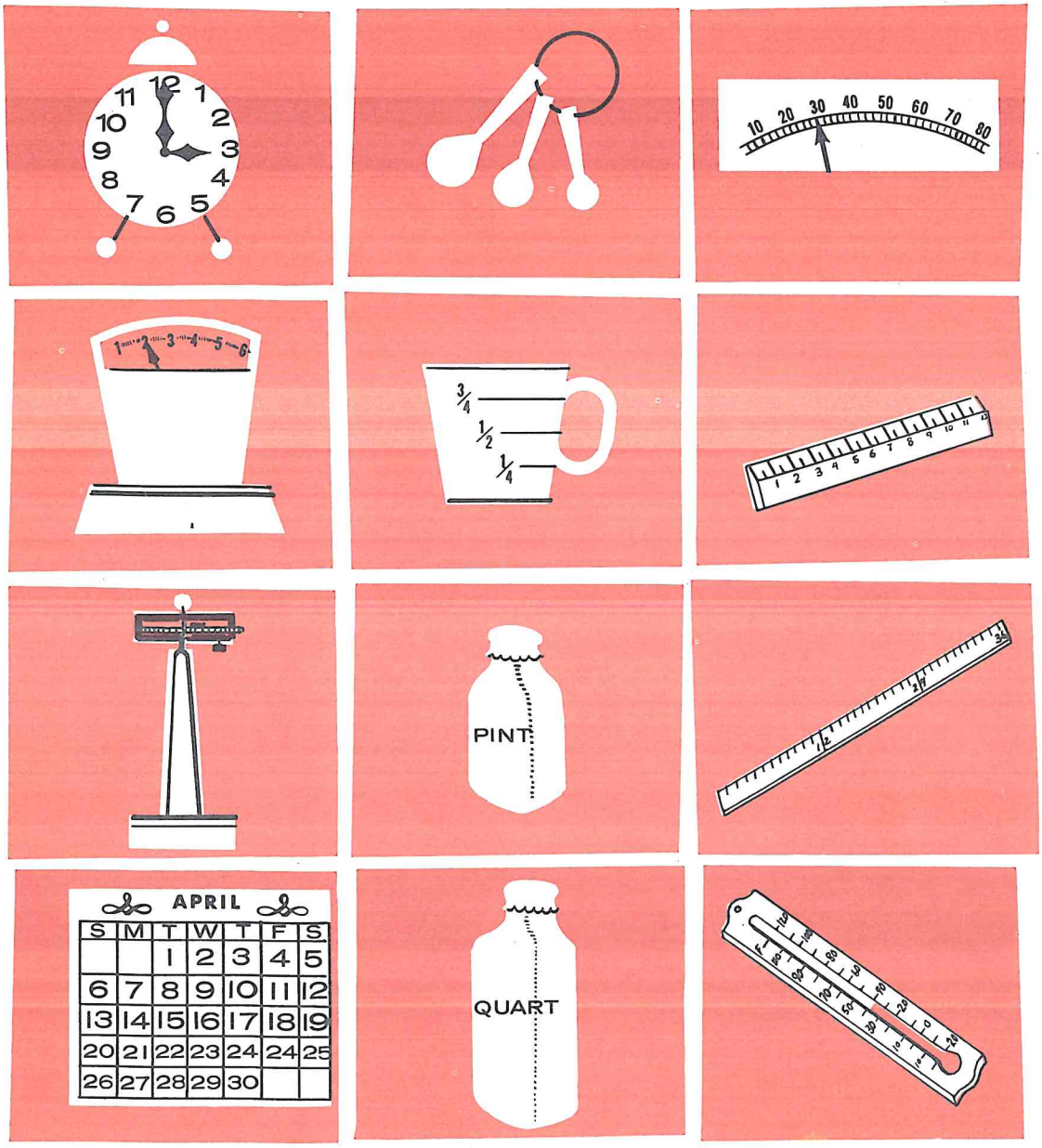
1 and 3 are ▲, and 4 more are ■.

$1 + 3 = ▲$, $▲ + 4 = ■$ $\qquad$ $1 + 3 + 4 = ■$

1.	$5 + 1 + 2 = ■$	$3 + 5 + 1 = ■$
2.	$1 + 2 + 6 = ■$	$3 + 3 + 1 = ■$
3.	$2 + 4 + 3 = ■$	$2 + 2 + 5 = ■$
4.	$3 + 4 + 1 = ■$	$1 + 4 + 4 = ■$

WHAT WOULD YOU USE?

Tell what each picture shows.



PRACTICE

1. Draw pictures to show these sets.

Set A has 2 more than set B.
Set C has 3 less than set D.
Sets E and F have the same number.
Set G has 4 more than set H.
Set I has 2 less than set J.
Set K has 1 less than set L.

2.

6 + 3 = ■	5 + 2 = ■	2 + 6 = ■
2 + 4 = ■	3 + 5 = ■	7 + 2 = ■
5 + 4 = ■	4 + 3 = ■	2 + 3 = ■

3.

8 − 5 = ■	9 − 7 = ■	7 − 3 = ■
9 − 6 = ■	6 − 5 = ■	8 − 6 = ■
7 − 5 = ■	9 − 4 = ■	5 − 3 = ■

4.

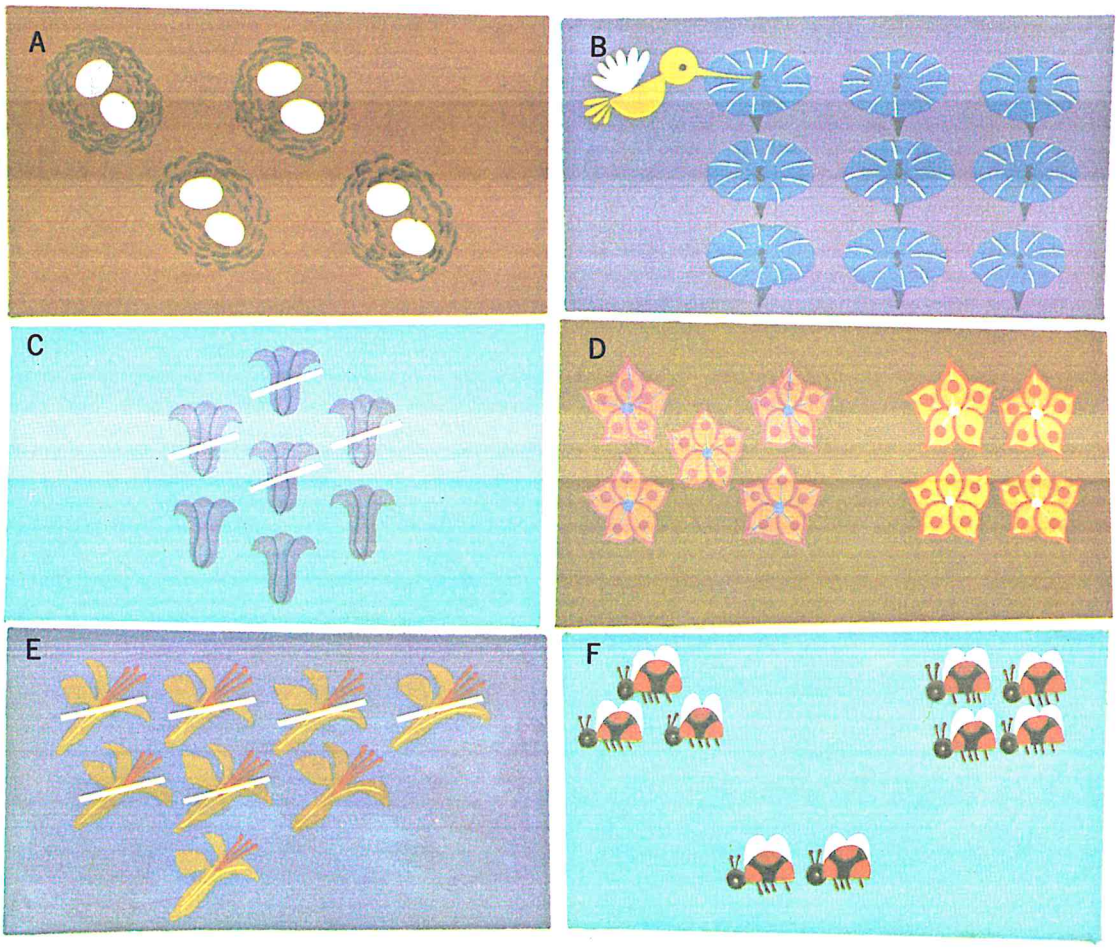
2 + ■ = 9	3 + ■ = 7	4 + ■ = 9
5 + 1 + 3 = ■		4 + 4 + 1 = ■
2 + 4 + 2 = ■		3 + 2 + 3 = ■

5.

2 twos = ■	2 threes = ■	4 twos = ■
3 threes = ■	2 fours = ■	3 twos = ■
■ threes = 6	■ twos = 8	■ twos = 4
■ threes = 9	■ twos = 6	■ fours = 8

PROBLEM SOLVING

Tell a number story about each picture.

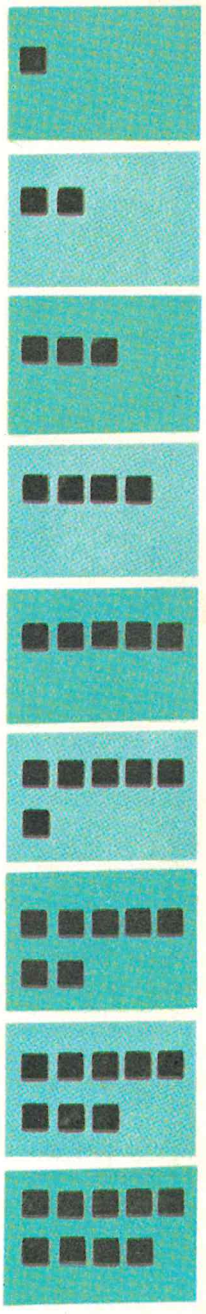


Find the answers. Which pictures help you?

1. $7 - 4 = \square$ $\quad 5 + 4 = \square$ $\quad 3 \text{ twos} = \square$
2. $9 - 1 = \square$ $\quad \square \text{ twos} = 8$ $\quad 2 \text{ twos} = \square$
3. $3 + 4 + 2 = \square$ $\quad 6 + \square = 8$

DO YOU REMEMBER?

How many in each box at the right?
Show how many on the bead line below.



1.

8 + 1 = ▲	4 + 3 = ▲	2 + 6 = ▲
3 + 5 = ▲	2 + 7 = ▲	1 + 4 = ▲
5 + 4 = ▲	1 + 5 = ▲	6 + 3 = ▲
3 + 3 = ▲	5 + 2 = ▲	4 + 4 = ▲

2.

9 = 4 + ▲	5 = 2 + ▲	8 = 6 + ▲
7 = 2 + ▲	9 = 7 + ▲	6 = 4 + ▲
9 = 3 + ▲	8 = 5 + ▲	7 = 3 + ▲

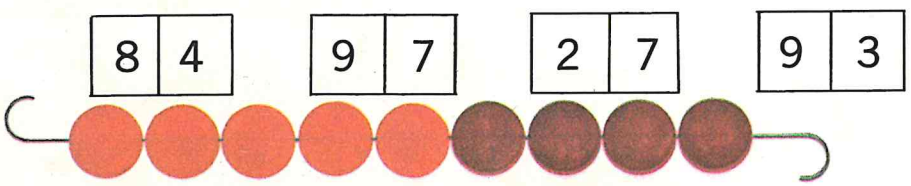
3.

6 − 4 = ▲	8 − 3 = ▲	9 − 6 = ▲
7 − 2 = ▲	9 − 5 = ▲	8 − 4 = ▲
5 − 4 = ▲	7 − 4 = ▲	9 − 2 = ▲

4.

3 twos = ▲	2 fours = ▲	3 threes = ▲
2 threes = ▲	4 twos = ▲	▲ fours = 8
▲ threes = 9	▲ twos = 8	▲ threes = 6

5. How many more or less?



ENRICHMENT

If the frames are the same,
you must choose the same number.

If the frames are different,
you may choose a different number.

1. □ + □ = 8 　　3 = △ − □

   9 = △ + □ 　　□ − △ = 2

2. △ − □ = 5 　　□ + △ = 7

   6 = △ + △ 　　1 = □ − △

3. □ − △ = 8 　　□ + △ = 4

   2 = □ + □ 　　6 = △ + □

4. 5 + △ + △ − □ = 3 　　□ − △ = 6

5. □ + △ + △ − □ = 4 　　8 = △ + □

6. □ + □ + □ + □ = 8 　　4 = □ − △

7. 9 − □ − △ − □ = 2 　　△ + □ = 5

8. □ + □ − △ − △ = 4 　　7 = □ − △

9. 8 − □ + △ + △ = 8 　　□ + □ = 4

DO YOU KNOW?

1. $1 + 3 = \square$ $\quad 2 + 4 = \square$ $\quad 1 + 1 = \square$
$3 + 3 = \square$ $\quad 1 + 2 = \square$ $\quad 2 + 3 = \square$

2. $1 + 4 = \square$ $\quad 4 + 2 = \square$ $\quad 2 + 1 = \square$
$3 + 2 = \square$ $\quad 1 + 5 = \square$ $\quad 3 + 1 = \square$

3. $5 + 1 = \square$ $\quad 2 + 2 = \square$ $\quad 4 + 1 = \square$

4. $6 - 3 = \square$ $\quad 2 - 1 = \square$ $\quad 5 - 4 = \square$
$4 - 1 = \square$ $\quad 3 - 2 = \square$ $\quad 6 - 2 = \square$

5. $5 - 1 = \square$ $\quad 4 - 2 = \square$ $\quad 5 - 3 = \square$
$4 - 3 = \square$ $\quad 6 - 5 = \square$ $\quad 3 - 1 = \square$

6. $6 - 1 = \square$ $\quad 5 - 2 = \square$ $\quad 6 - 4 = \square$

7. $2 + \square = 5$ $\quad 6 - \square = 1$ $\quad 1 + 4 = \square$
$6 - 4 = \square$ $\quad 5 - 3 = \square$ $\quad 2 + \square = 6$

8. $1 + 5 = \square$ $\quad 5 - 4 = \square$ $\quad 3 + \square = 6$
$2 + \square = 4$ $\quad 3 + \square = 5$ $\quad 4 - \square = 1$

9. Find the surprise.

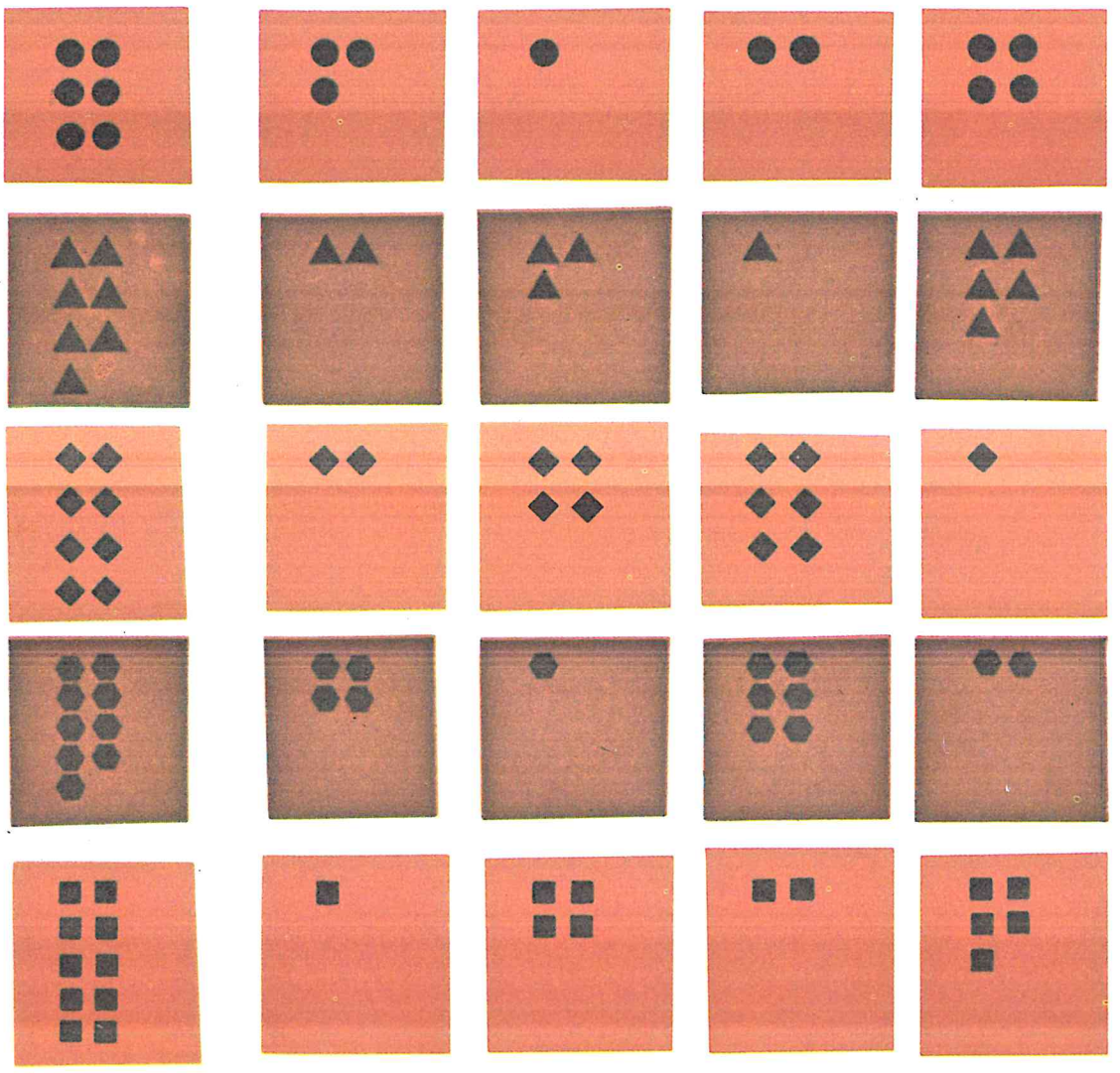
3	5	1
1	3	5
5	1	3

3	1	2
1	2	3
2	3	1

2	4	3
4	3	2
3	2	4

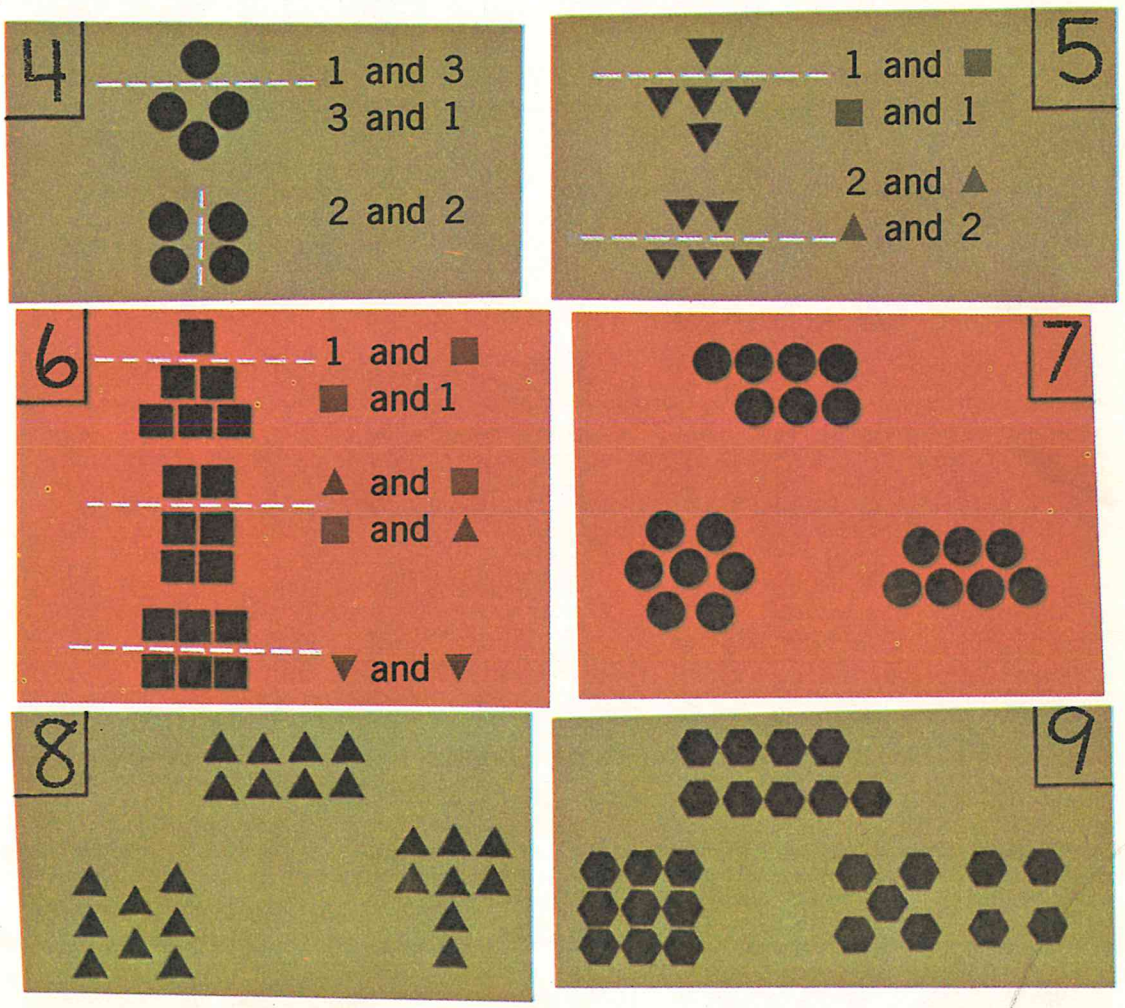
COMPLETING SETS

How many? How many more do you need?



MANY WAYS TO SHOW SETS

1. Tell different ways to show these sets.

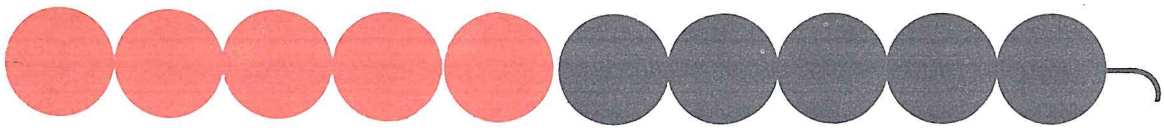


2. How many ways did you find for each?

3. Write put-together facts for each number.

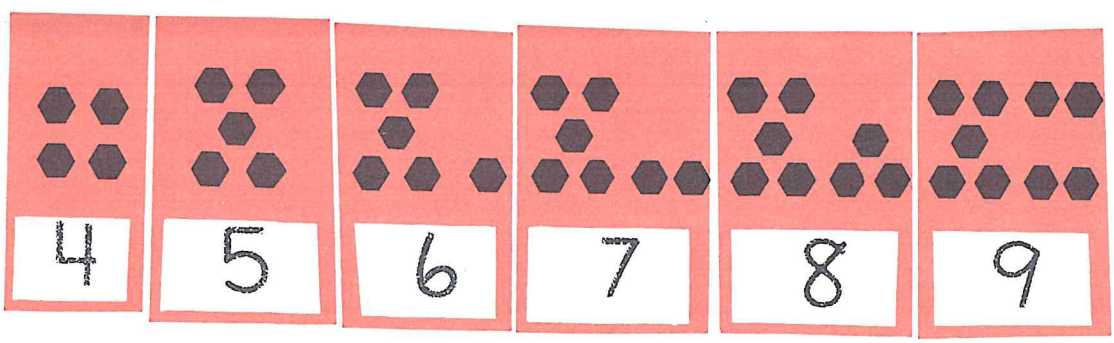
4. Write take-away facts for each number.

ADD TO FIND THE ANSWERS

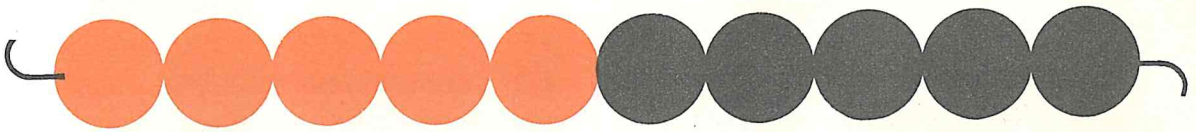


Use the bead line to help you find answers.

1.	3 + 1 = ☐	2 + 6 = ☐	4 + 3 = ☐
	6 + 3 = ☐	2 + 2 = ☐	7 + 1 = ☐
2.	3 + 5 = ☐	6 + 1 = ☐	2 + 3 = ☐
	7 + 2 = ☐	2 + 5 = ☐	1 + 4 = ☐
3.	6 + 2 = ☐	1 + 5 = ☐	5 + 4 = ☐
	1 + 3 = ☐	5 + 2 = ☐	4 + 4 = ☐
4.	3 + 4 = ☐	5 + 3 = ☐	1 + 8 = ☐
	4 + 2 = ☐	5 + 1 = ☐	3 + 2 = ☐
5.	3 + 6 = ☐	2 + 4 = ☐	1 + 7 = ☐
	8 + 1 = ☐	3 + 3 = ☐	4 + 5 = ☐
6.	3 + 4 = ☐	2 + 7 = ☐	4 + 1 = ☐
	7 + 2 = ☐	1 + 6 = ☐	6 + 3 = ☐

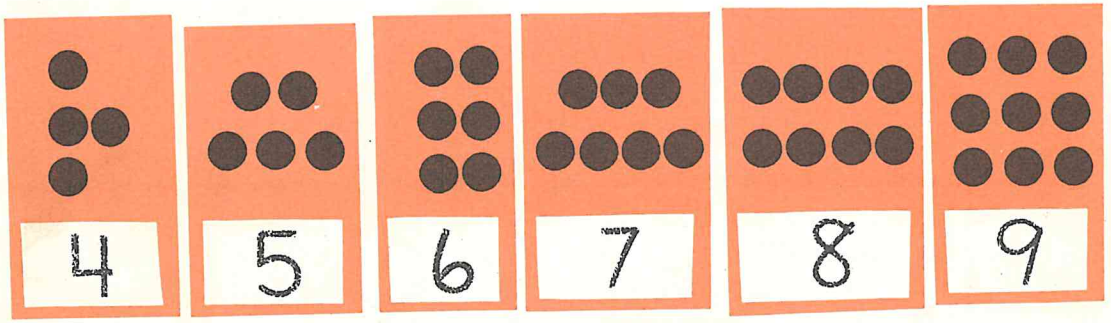


SUBTRACT TO FIND THE ANSWERS



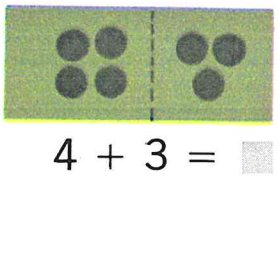
Use the bead line to help you find answers.

1.	$5 - 2 =$ ▢	$8 - 7 =$ ▢	$6 - 3 =$ ▢
	$4 - 1 =$ ▢	$7 - 4 =$ ▢	$9 - 6 =$ ▢
2.	$8 - 2 =$ ▢	$4 - 3 =$ ▢	$7 - 5 =$ ▢
	$6 - 1 =$ ▢	$9 - 2 =$ ▢	$8 - 6 =$ ▢
3.	$9 - 1 =$ ▢	$4 - 2 =$ ▢	$5 - 3 =$ ▢
	$7 - 3 =$ ▢	$6 - 5 =$ ▢	$8 - 4 =$ ▢
4.	$5 - 4 =$ ▢	$9 - 7 =$ ▢	$6 - 2 =$ ▢
	$9 - 3 =$ ▢	$7 - 1 =$ ▢	$8 - 5 =$ ▢
5.	$6 - 4 =$ ▢	$9 - 8 =$ ▢	$7 - 2 =$ ▢
	$8 - 1 =$ ▢	$7 - 6 =$ ▢	$9 - 5 =$ ▢
6.	$5 - 1 =$ ▢	$9 - 4 =$ ▢	$8 - 3 =$ ▢
	$9 - 6 =$ ▢	$8 - 6 =$ ▢	$7 - 5 =$ ▢

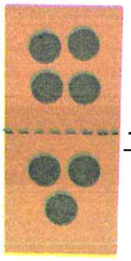


WRITING ADDITION FACTS

1.

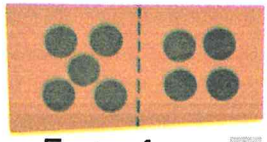


4 + 3 = ☐

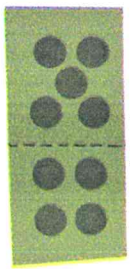


$$\begin{array}{r} 4 \\ +3 \\ \hline \square \end{array}$$

2.

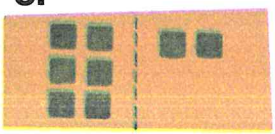


5 + 4 = ☐

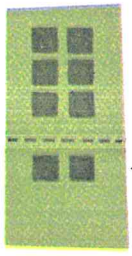


$$\begin{array}{r} 5 \\ +4 \\ \hline \square \end{array}$$

3.

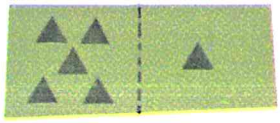


6 + 2 = ☐

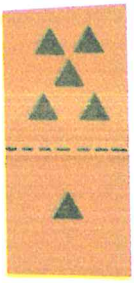


$$\begin{array}{r} \square \\ +2 \\ \hline \square \end{array}$$

4.



5 + 1 = ☐



$$\begin{array}{r} 5 \\ + \square \\ \hline \square \end{array}$$

5.

8	3	3	6	4	5
+1	+3	+6	+1	+5	+3
☐	☐	☐	☐	☐	☐

6.

3	4	2	3	1	4
+2	+4	+7	+5	+3	+2
☐	☐	☐	☐	☐	☐

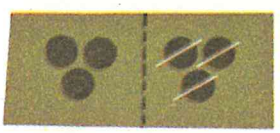
7.

5	2	6	1	2	7
+2	+6	+3	+7	+5	+2
☐	☐	☐	☐	☐	☐

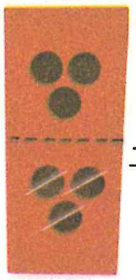
1	2	3	4	5	6	7	8	9

WRITING SUBTRACTION FACTS

1.

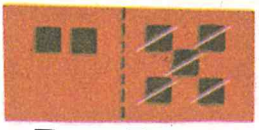


6 − 3 = ■

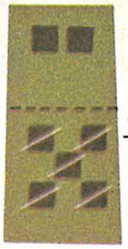


$$\begin{array}{r} 6 \\ -3 \\ \hline \square \end{array}$$

2.



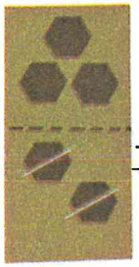
7 − 5 = ■



$$\begin{array}{r} 7 \\ -5 \\ \hline \square \end{array}$$

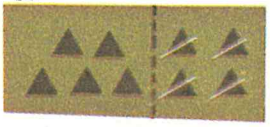
3.

5 − 2 = ■



$$\begin{array}{r} 5 \\ -\triangle \\ \hline \square \end{array}$$

4.



9 − 4 = ■

$$\begin{array}{r} \triangle \\ -4 \\ \hline \square \end{array}$$

5.

8	6	9	7	8	9
−1	−2	−5	−4	−3	−2
■	■	■	■	■	■

6.

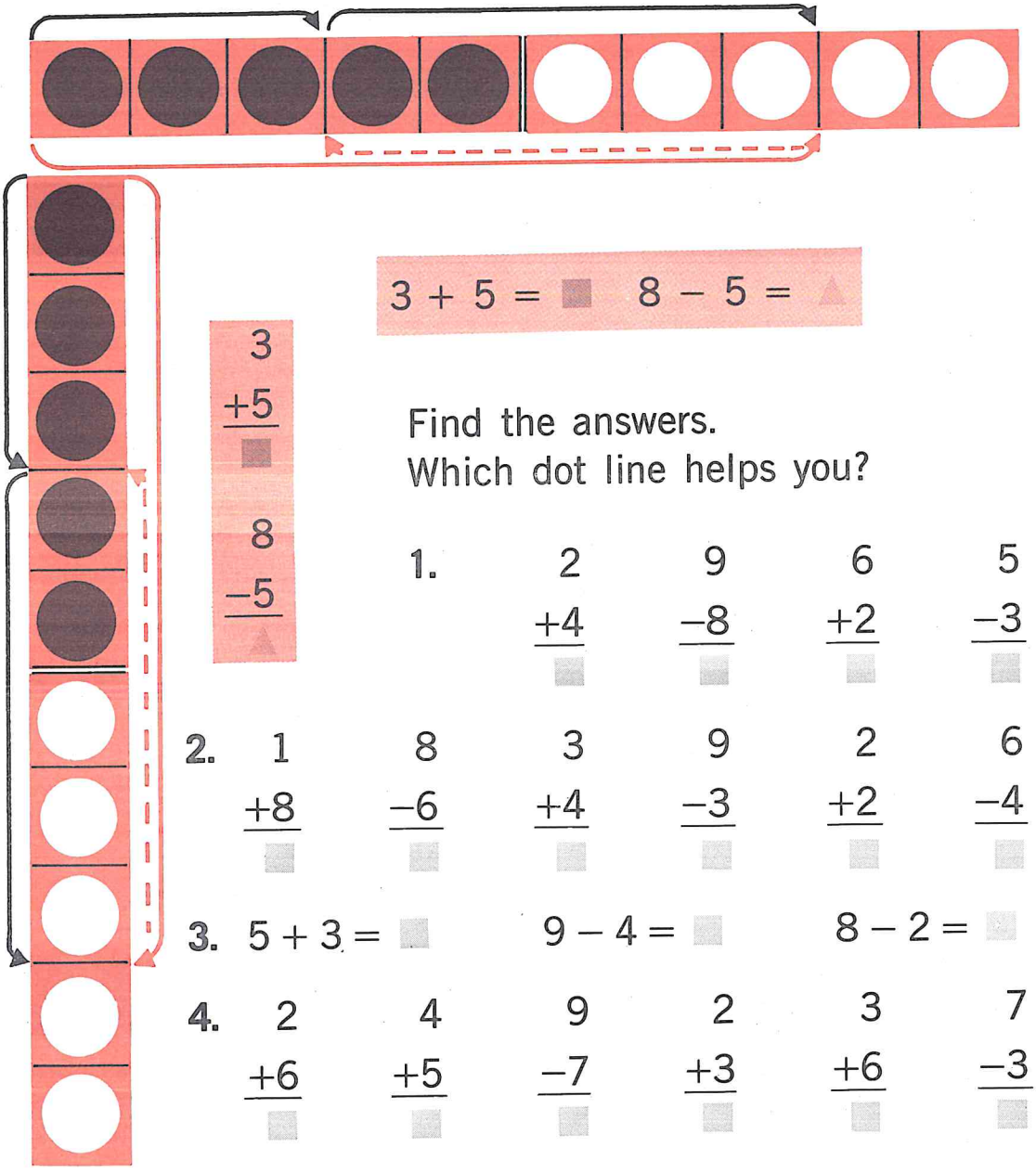
8	9	7	5	9	6
−5	−3	−2	−4	−6	−4
■	■	■	■	■	■

7.

4	8	7	9	8	9
−3	−2	−3	−7	−4	−1
■	■	■	■	■	■

1	2	3	4	5	6	7	8	9

USING WHAT YOU KNOW



$3 + 5 = \square$ $8 - 5 = \triangle$

$$\begin{array}{r} 3 \\ +5 \\ \hline \square \end{array} \qquad \begin{array}{r} 8 \\ -5 \\ \hline \triangle \end{array}$$

Find the answers.
Which dot line helps you?

1. $\begin{array}{r} 2 \\ +4 \\ \hline \square \end{array}$ $\begin{array}{r} 9 \\ -8 \\ \hline \square \end{array}$ $\begin{array}{r} 6 \\ +2 \\ \hline \square \end{array}$ $\begin{array}{r} 5 \\ -3 \\ \hline \square \end{array}$

2. $\begin{array}{r} 1 \\ +8 \\ \hline \square \end{array}$ $\begin{array}{r} 8 \\ -6 \\ \hline \square \end{array}$ $\begin{array}{r} 3 \\ +4 \\ \hline \square \end{array}$ $\begin{array}{r} 9 \\ -3 \\ \hline \square \end{array}$ $\begin{array}{r} 2 \\ +2 \\ \hline \square \end{array}$ $\begin{array}{r} 6 \\ -4 \\ \hline \square \end{array}$

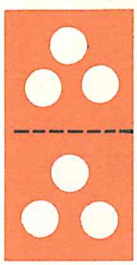
3. $5 + 3 = \square$ $9 - 4 = \square$ $8 - 2 = \square$

4. $\begin{array}{r} 2 \\ +6 \\ \hline \square \end{array}$ $\begin{array}{r} 4 \\ +5 \\ \hline \square \end{array}$ $\begin{array}{r} 9 \\ -7 \\ \hline \square \end{array}$ $\begin{array}{r} 2 \\ +3 \\ \hline \square \end{array}$ $\begin{array}{r} 3 \\ +6 \\ \hline \square \end{array}$ $\begin{array}{r} 7 \\ -3 \\ \hline \square \end{array}$

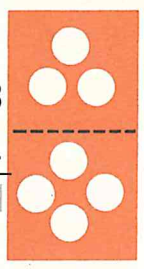
5. $3 + 3 = \square$ $2 + 7 = \square$ $7 - 6 = \square$

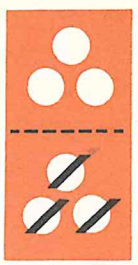
THE DOUBLES

How do the doubles help you find answers?

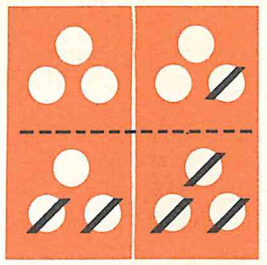


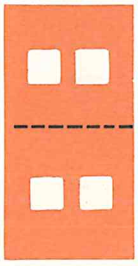
$$\begin{array}{cc} 3 & 3 \\ +3 & +4 \\ \hline \square & \square \end{array}$$



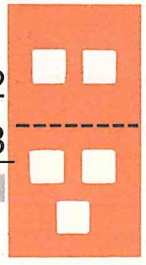


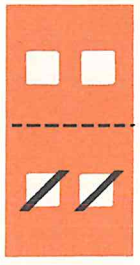
$$\begin{array}{ccc} 6 & 6 & 6 \\ -3 & -2 & -4 \\ \hline \square & \square & \square \end{array}$$



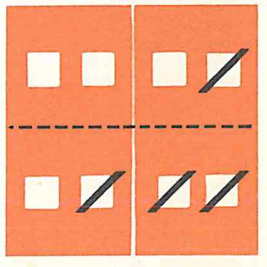


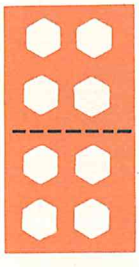
$$\begin{array}{cc} 2 & 2 \\ +2 & +3 \\ \hline \square & \square \end{array}$$



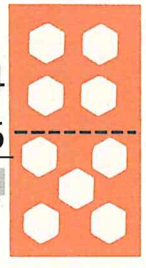


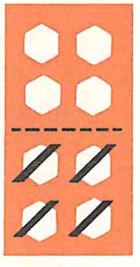
$$\begin{array}{ccc} 4 & 4 & 4 \\ -2 & -1 & -3 \\ \hline \square & \square & \square \end{array}$$



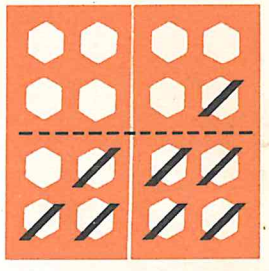


$$\begin{array}{cc} 4 & 4 \\ +4 & +5 \\ \hline \square & \square \end{array}$$





$$\begin{array}{ccc} 8 & 8 & 8 \\ -4 & -3 & -5 \\ \hline \square & \square & \square \end{array}$$



1.

$$\begin{array}{cccccc} 2 & 6 & 1 & 4 & 2 & 4 \\ +3 & -4 & +1 & -3 & -1 & +4 \\ \hline \square & \square & \square & \square & \square & \square \end{array}$$

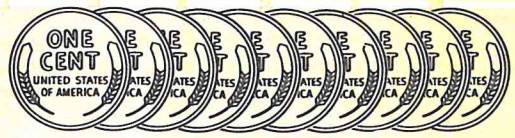
2.

$$\begin{array}{cccccc} 6 & 3 & 8 & 4 & 3 & 8 \\ -2 & +3 & -3 & +5 & +4 & -5 \\ \hline \square & \square & \square & \square & \square & \square \end{array}$$

LEARNING ABOUT MONEY

1¢ 5¢ 10¢ .

A

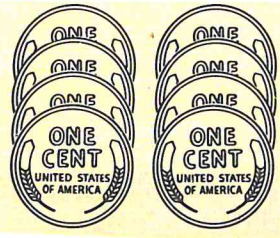
B 

Which is more money? How much more?

C or

D or

E or

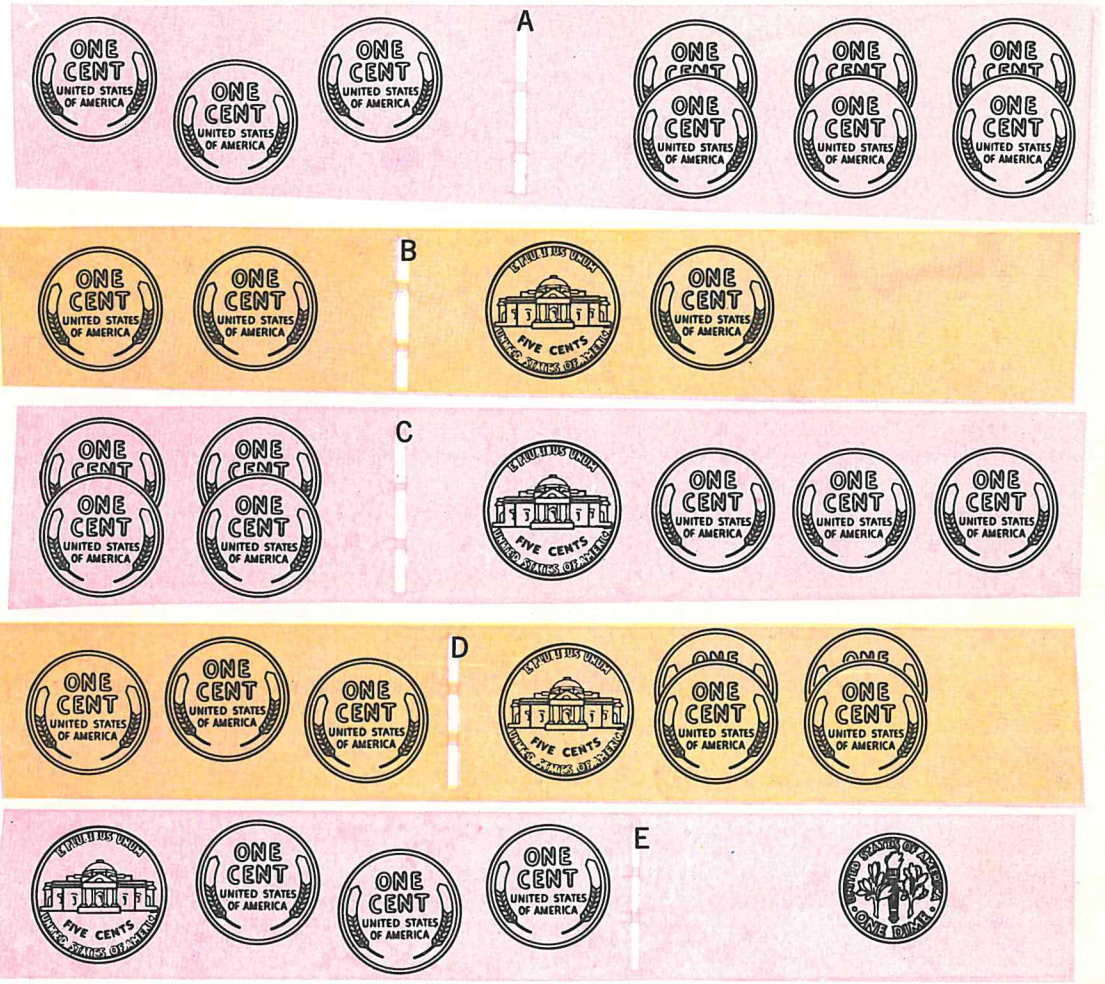
F or 

G or

H or

COMPARING AMOUNTS OF MONEY

How many more pennies do you need?



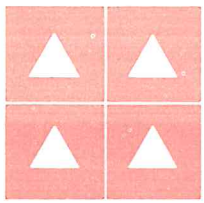
Find the answers. Use the penny line to help.

1. $3¢ + 6¢ =$ ■ ¢ $\quad 4¢ + 3¢ =$ ■ ¢
2. $8¢ - 5¢ =$ ■ ¢ $\quad 9¢ - 2¢ =$ ■ ¢

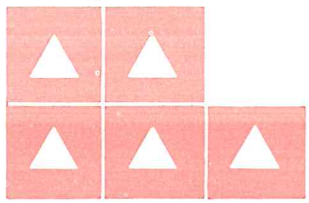
MORE OR LESS

How many △s in each set? How do you know?

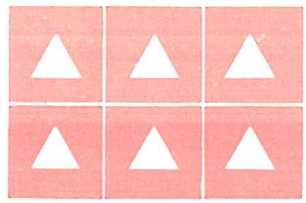
A



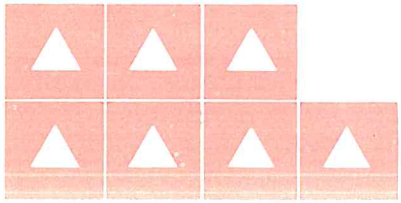
B



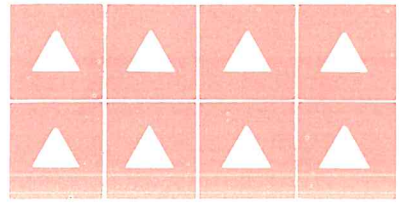
C



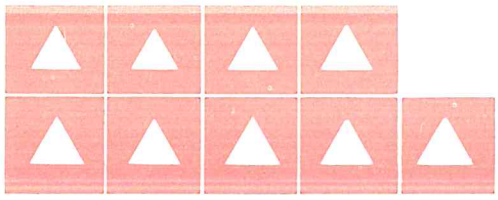
D



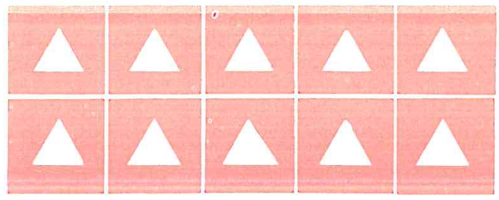
E



F

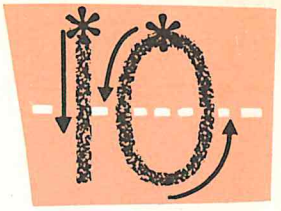


G

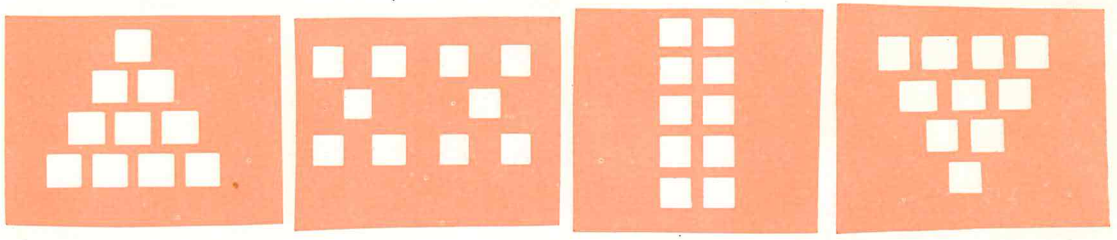


1.	5 is	more than 4.		6 is	more than 5.
	7 is	more than 6.		8 is	more than 7.
	9 is	more than 8.		10 is	more than 9.
2.	5 is	less than 7.		8 is	more than 6.
	9 is	less than 10.		7 is	less than 9.
3.	10 is	more than 8.		8 is	less than 9.
	7 is	more than 5.		6 is	less than 8.
4.	4 is	less than 5.		4 is	less than 6.
	9 is	more than 7.		7 is	less than 8.
5.	8 is	less than 10.		6 is	more than 4.
	5 is	less than 6.		6 is	less than 7.

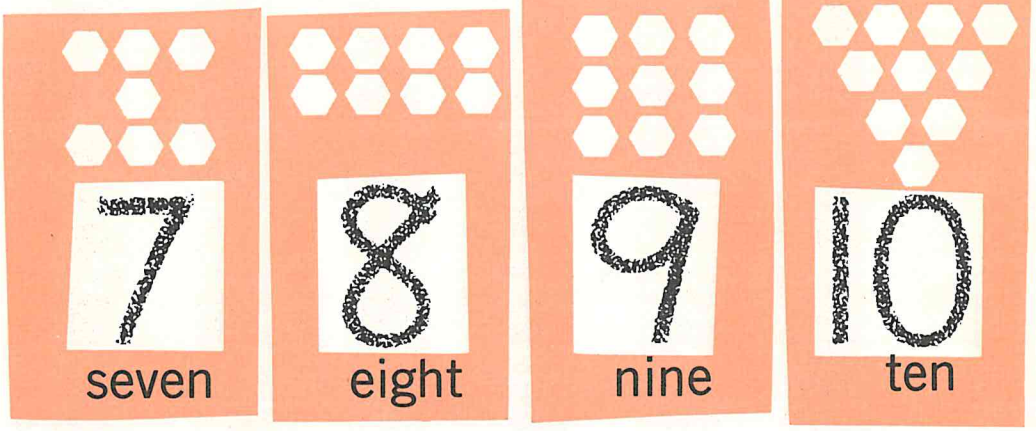
LEARNING ABOUT TEN



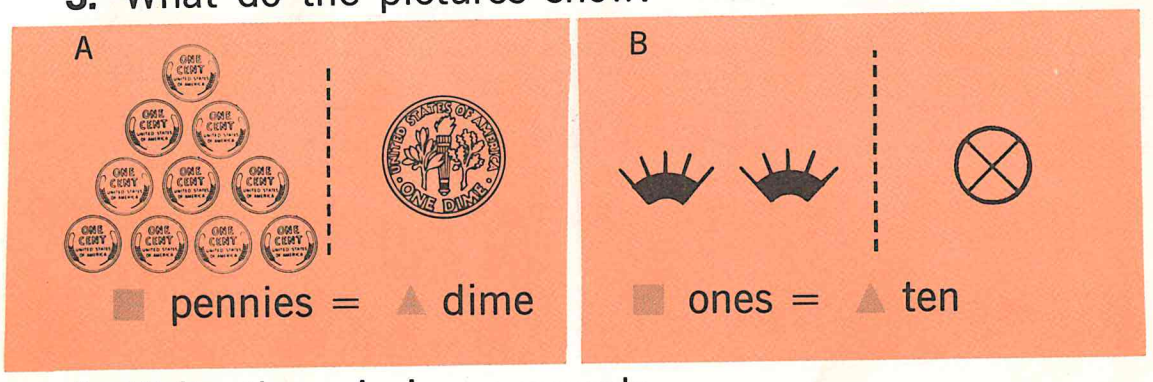
1. How many ☐s in each picture?
Write a numeral for each picture.



2. Read the words. Write the numerals.



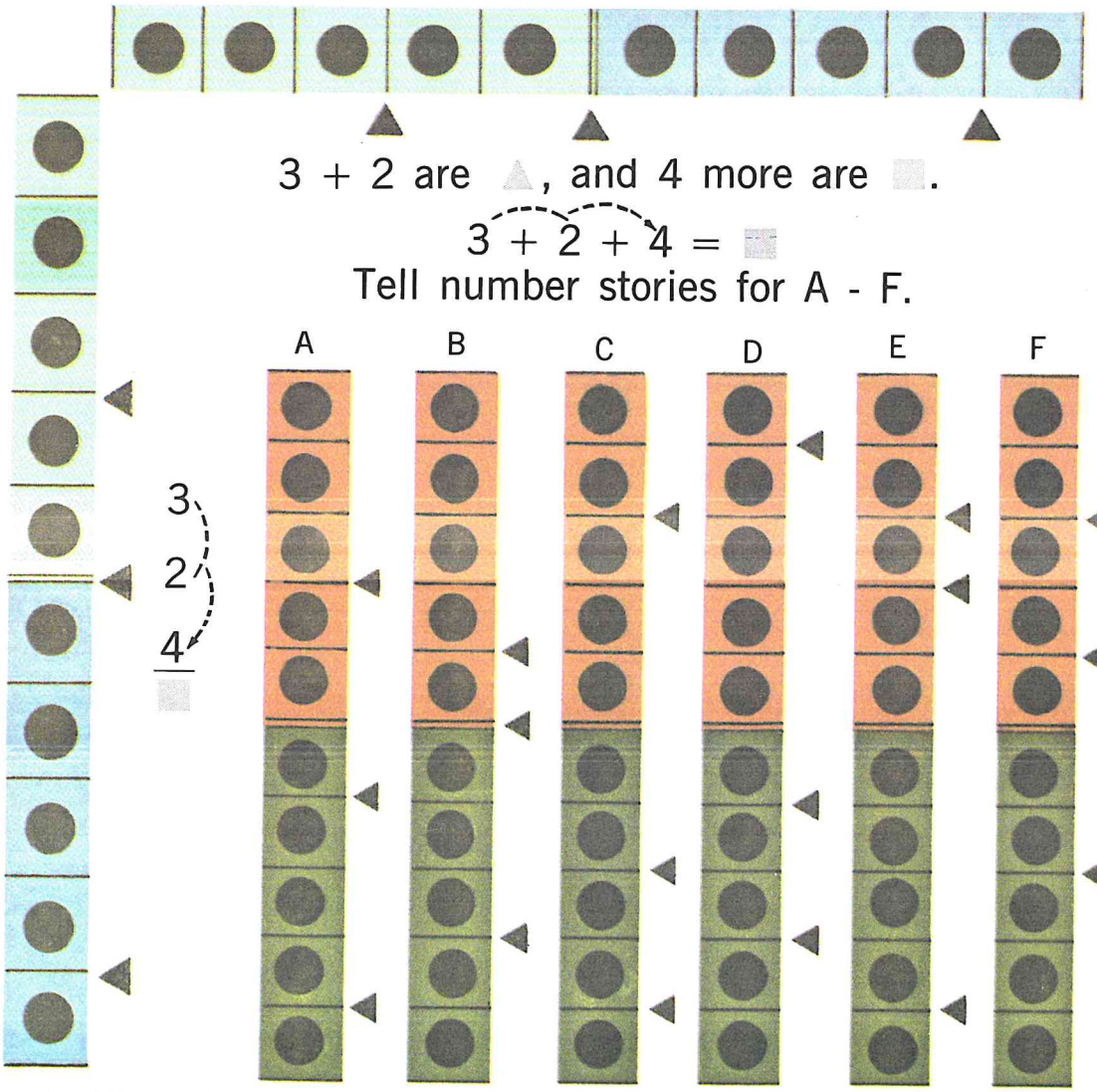
3. What do the pictures show?



4. Write the missing numerals.

1	2			5		7	8		

ADDING THREE NUMBERS



3 + 2 are ▲, and 4 more are ■.

3 + 2 + 4 = ■

Tell number stories for A - F.

A B C D E F

3
2
4
■

Find the answers. Which dot lines help?

1.

4	2	
1	1	
3	6	
■	■	

2.

3	2
3	5
3	2
■	■

3.

3	1
2	5
3	2
■	■

MORE ABOUT ADDING THREE NUMBERS

Add these numbers.

1.

3	1	2	3	1
1	3	3	5	1
5	4	2	1	6
■	■	■	■	■

2.

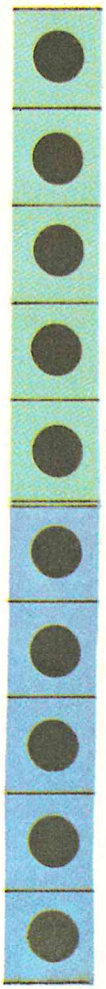
1	2	3	2	5
4	4	4	1	1
4	1	2	5	2
■	■	■	■	■

3.

4	1	2	3	1
2	1	5	2	2
3	7	1	3	6
■	■	■	■	■

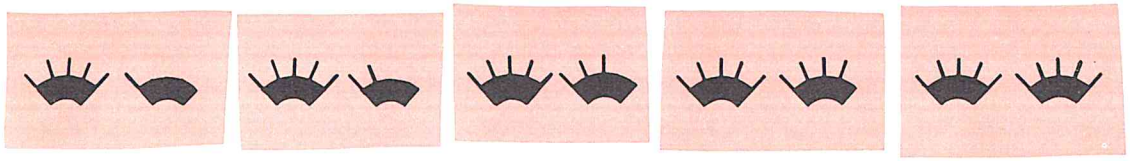
4.

3	4	1	4	5
3	1	1	3	2
2	4	2	2	2
■	■	■	■	■



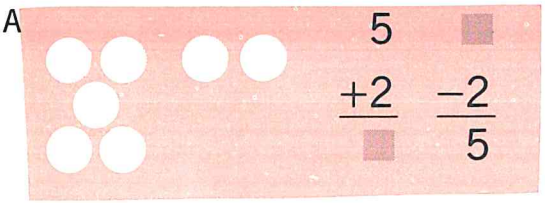
USING FIVE

Write a numeral for each hand picture.



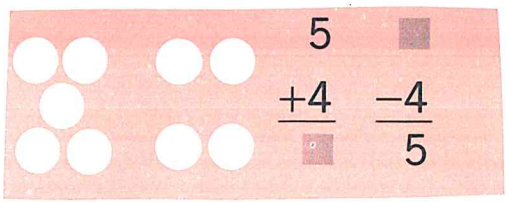
How many ◯ s in each picture?

A



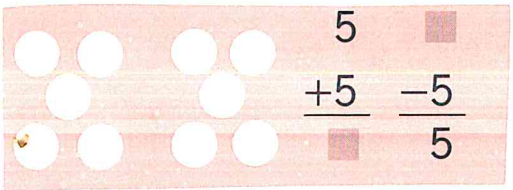
$$5 \quad \square \qquad +2 \quad -2 \qquad \square \quad 5$$

B



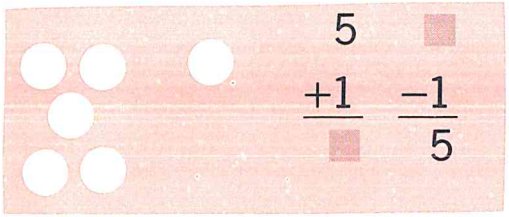
$$5 \quad \square \qquad +4 \quad -4 \qquad \square \quad 5$$

C



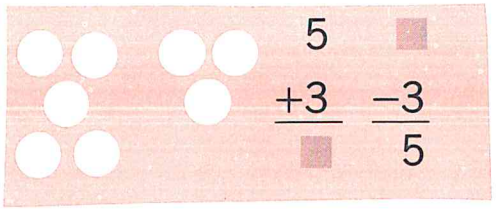
$$5 \quad \square \qquad +5 \quad -5 \qquad \square \quad 5$$

D



$$5 \quad \square \qquad +1 \quad -1 \qquad \square \quad 5$$

E



$$5 \quad \square \qquad +3 \quad -3 \qquad \square \quad 5$$

Use the bead line to help you find answers.

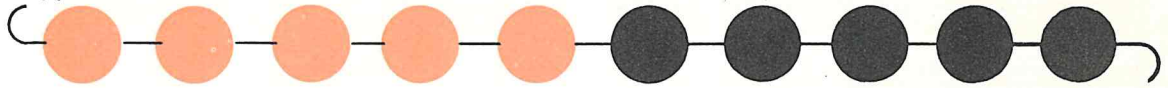
1.	5	7	4	6	2	5	9
	+1	−2	+5	−1	+5	+3	−4
	☐	☐	☐	☐	☐	☐	☐
2.	1	8	5	3	10	5	5
	+5	−3	+5	+5	− 5	+2	+4
	☐	☐	☐	☐	☐	☐	☐

MANY WAYS TO COUNT

Count the beads on each line.

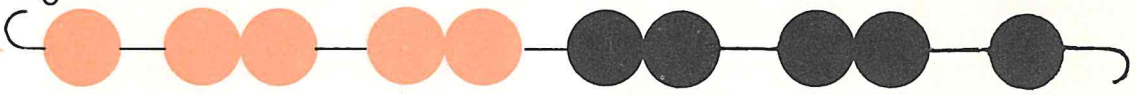
How many? How did you count them?

A

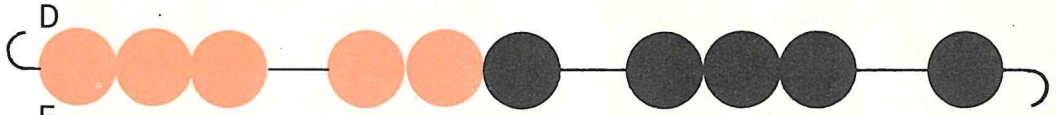


B

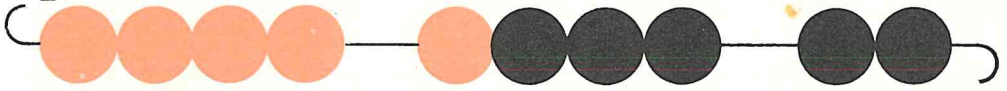
C



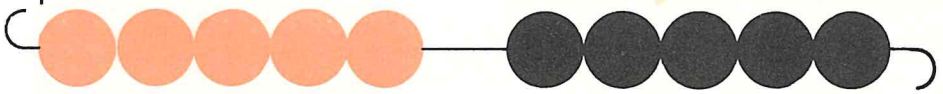
D



E



F



Write the missing numerals.

G

1		3	4			7		9	

H

2	4		8	

I

3		9

J

7		9	

K

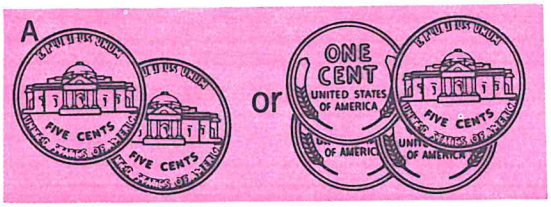
1	3	5		

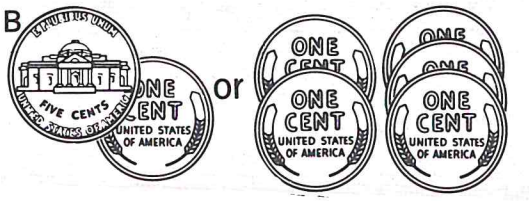
L

10			7	6				2	1

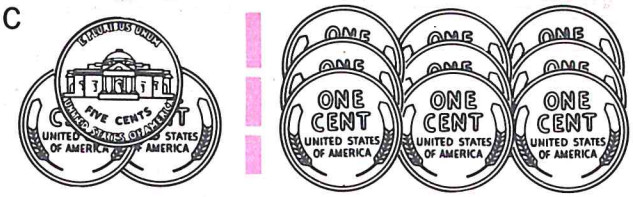
DO YOU REMEMBER?

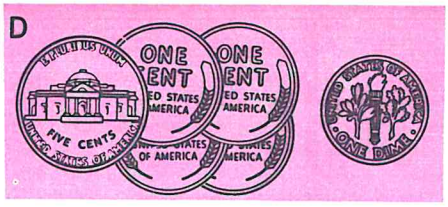
Which is more money? How much more?

A 

B 

How many more pennies do you need?

C 

D 

Find the answers.

1.

5	1	4	2	6	3	5
+4	+5	+3	+7	+2	+6	+3

2.

7	8	9	8	6	9	9
−5	−3	−5	−6	−5	−7	−4

3.

1	2	2	2	3	2	4
6	4	2	1	3	3	4
2	2	5	5	3	1	1

4. 9¢ − 6¢ = ▢¢ 8¢ − 2¢ = ▢¢

2¢ + ▢¢ = 7¢ 4¢ + 2¢ = ▢¢

PRACTICE

1. Find the answers.

a. $2¢ + \square ¢ = 9¢$ $\quad \square ¢ - 3¢ = 6¢$

b. $9¢ - 5¢ = \square ¢$ $\quad 8¢ - \square ¢ = 1¢$

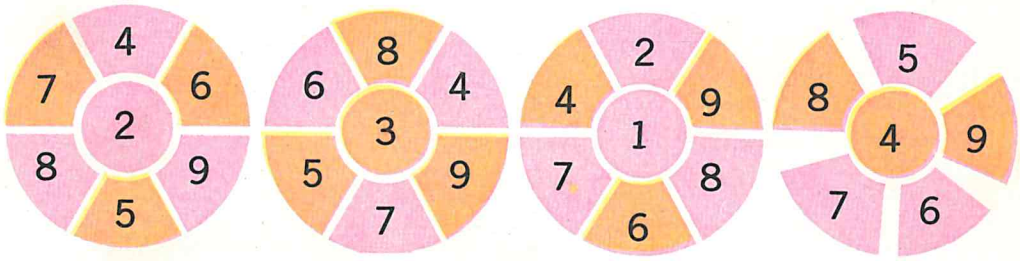
c. $2 + \square = 8$ $\quad \square + 3 = 9$ $\quad 3 + \square = 4$

d. $1 = 9 - \square$ $\quad 4 = 8 - \square$ $\quad 7 = 9 - \square$

e. $3 = 7 - \square$ $\quad 4 = 5 - \square$ $\quad 1 = 7 - \square$

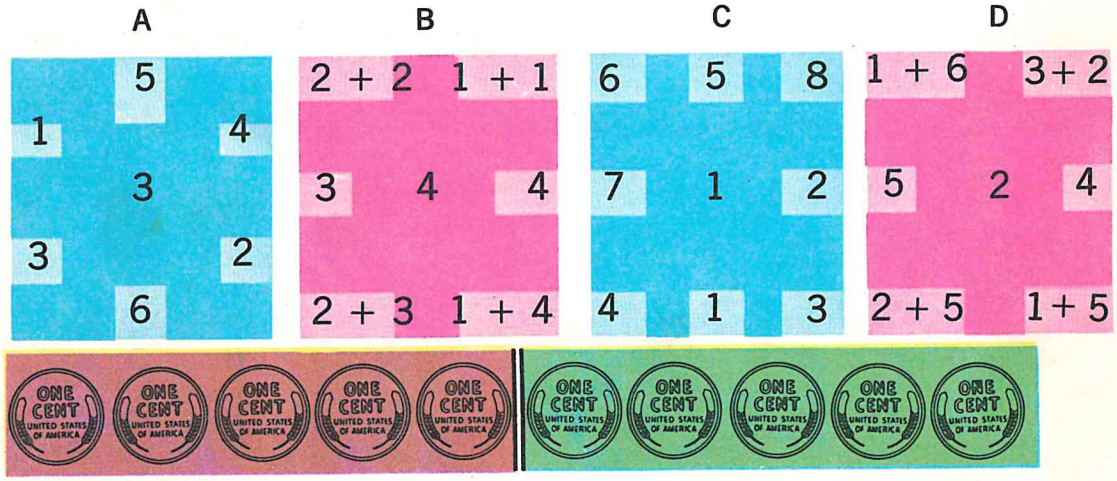
2. Subtract the numbers in the center.
Write the number sentences.

A B C D



3. Add the numbers in the center.
Write the number sentences.

A B C D



ENRICHMENT

What are the numbers?

1. Begin with 5.
Add 2.
Subtract 3.
Subtract 2.
Add 7.
The number is ▢.

2. Begin with 7.
Add 2.
Subtract 3.
Add 2.
Subtract 5.
The number is ▢.

3. Begin with 2 fours.
Subtract 3.
Add 2 twos.
Subtract 2 threes.
Add 2.
The number is ▢.

4. Begin with 4 twos.
Add 1.
Subtract 2.
Subtract 5.
Add 6.
The number is ▢.

5. Begin with 3.
Add the number
of twos in 6.
Subtract 4.
Add 7.
Subtract 5.
The number is ▢.

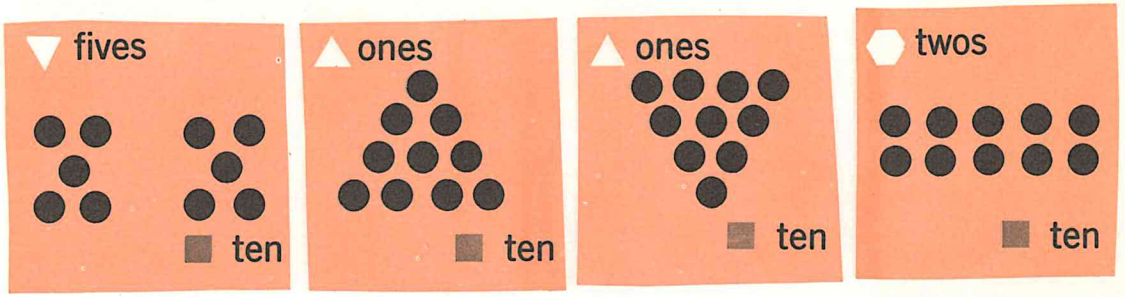
6. Begin with 2 threes.
Add 3.
Subtract 2 fours.
Add 8.
Subtract 3 twos.
Add 5.
The number is ▢.

10 ones

LEARNING ABOUT TENS

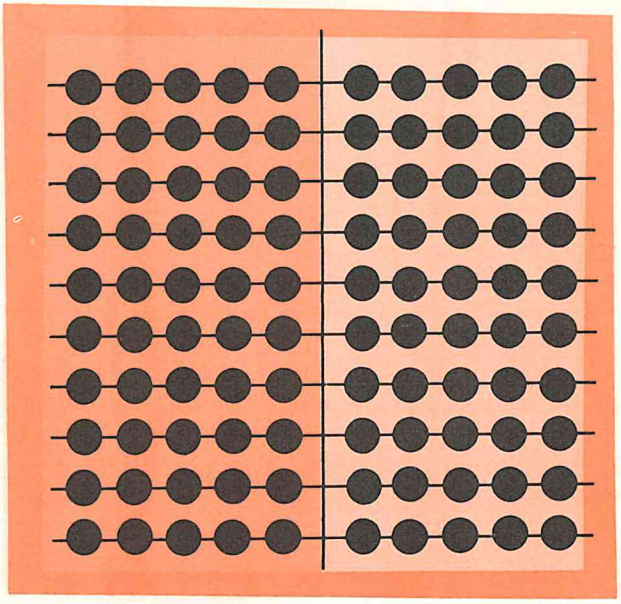
1 ten

1. How many in each box?



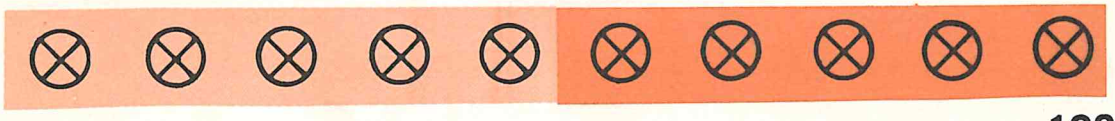
2. How many beads in 1 row? in 2 rows? in 3?
Count the beads by 10's. How many in all?

1 row = 10
2 rows = 20
3 rows = ■
4 rows = ■
5 rows = ■
6 rows = ■
7 rows = ■
8 rows = ■
9 rows = ■
10 rows = ■



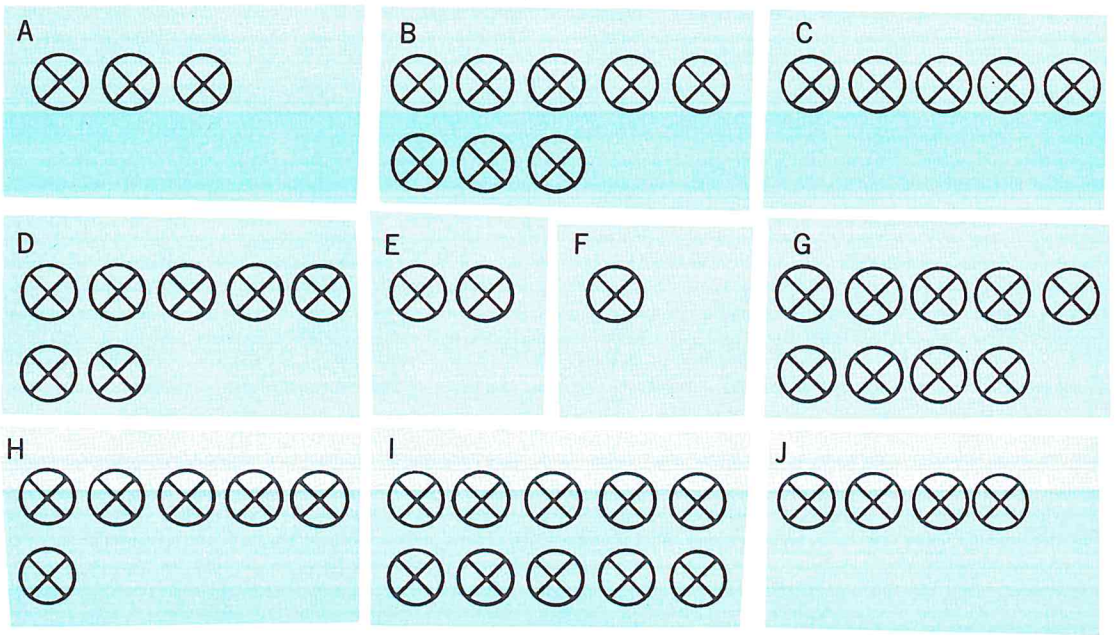
3. How many tens?
Show how many on the picture line below.

10 20 30 40 50 60 70 80 90 100



"TENS" NUMBERS

1. How many tens in each picture?
How many ones? What are the numbers?



2. Write numerals for each picture.

3.

5 tens = 50	7 tens =	1 ten =
2 tens =	6 tens =	3 tens =
8 tens =	4 tens =	10 tens =

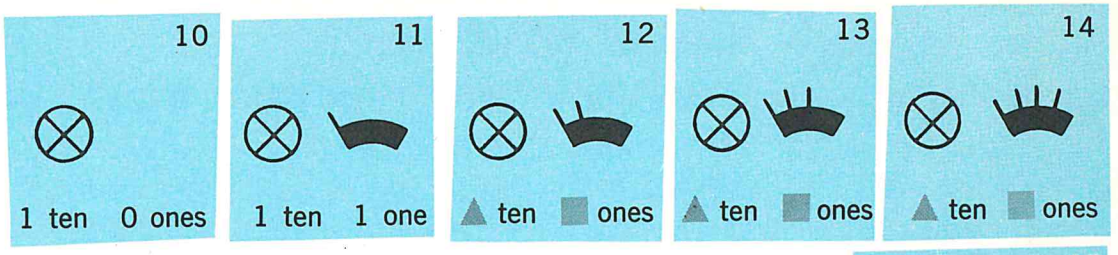
4.

30 = 3 tens	80 = tens	50 = tens
70 = tens	100 = tens	60 = tens
90 = tens	20 = tens	40 = tens

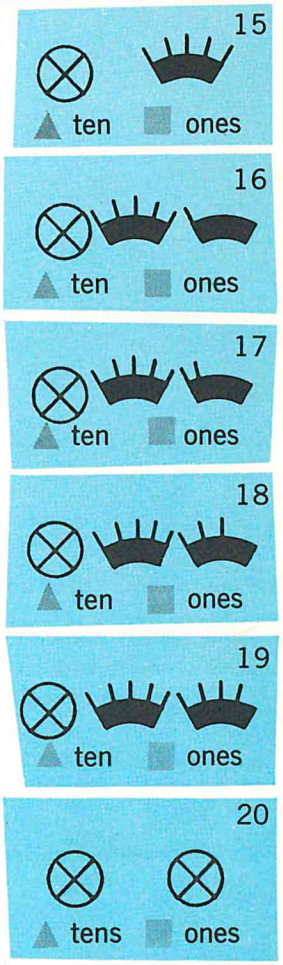
5. Find pictures for these numerals.

10	20	30	40	50
60	70	80	90	100

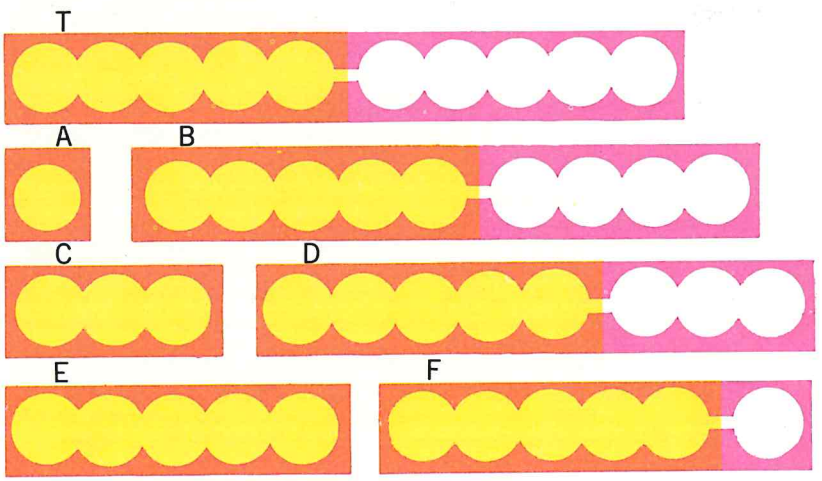
TEN THROUGH TWENTY



1. Look at the pictures.
How many tens? How many ones?
What are the numbers?



2. How many beads on each line?



3. Use line T and one other line to show these.

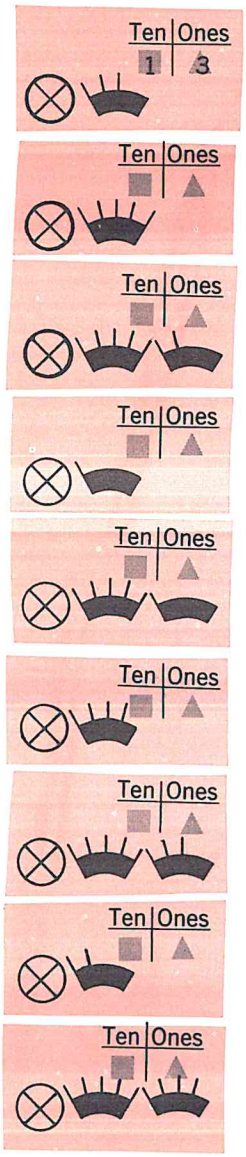
15 18 11 13 16 19

4. What numbers are missing?

10	11			14		16			19	

"TEEN" NUMBERS

1. Look at the pictures.
How many tens? How many ones?
What are the numbers?
Write the numerals.



2. Find the answers.

a. 1 ten, 6 ones = 16
1 ten, 3 ones =
1 ten, 1 one =
1 ten, 9 ones =

b. 15 = ten, ones
17 = ten, ones
12 = ten, ones
18 = ten, ones

3.

Before		After
14	15	16
	11	
	19	
	13	
	17	
	12	
	18	

4. What are the numbers?

10 and 1 = 11
10 and 2 =
10 and 3 =
10 and 4 =
10 and 5 =
10 and 6 =
10 and 7 =
10 and 8 =
10 and 9 =

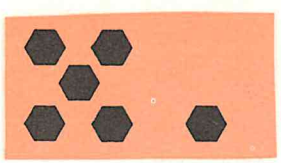
5.

Tens	Ones	
1	7	17
1	1	
1	9	
1	6	
1	3	

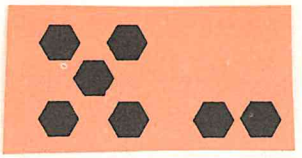
6.

Larger or Smaller?		
14	15	14S
12	11	
17	19	
18	16	
13	14	

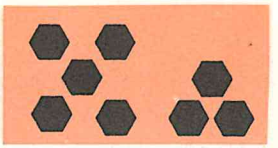
FIVE AND HOW MANY MORE



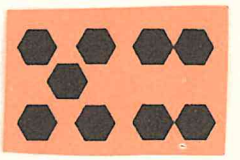
5 + ▲ = 6



5 + ▼ = 7



■ + ● = 8



■ + ⬢ = 9

1. Find the answers.

9 = ■ + 4 = ● + 3 = ▲ + ▲ = ■ + ■

8 + ▼ = ● + 3 = 2 + ▲ = 4 + ■

6 = ■ + 1 = ▲ + 3 = 1 + ■ = 4 + ●

2 + ▼ = ▲ + 3 = 1 + ■ = 4 + ●

7 = ■ + 2 = 4 + ▼ = 2 + ■ = ▼ + 4

● + 1 = 4 + ▼ = 2 + ■ = ▼ + 4

8 = ■ + 3 = ● + 2 = 1 + ▼ = 3 + ■

4 + ▲ = ● + 2 = 1 + ▼ = 3 + ■

2. How many do you know?

a.

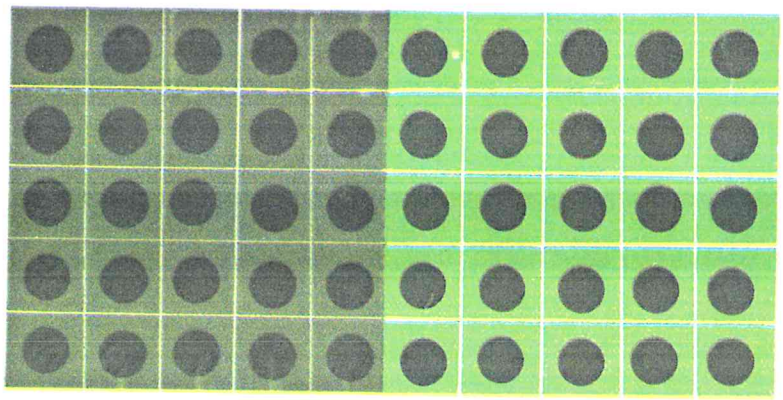
2	9	1	7	8	7	3
+6	−1	+6	+2	−3	−6	+6
■	■	■	■	■	■	■

b.

7	7	4	8	9	2	9
+1	−5	+5	−1	−6	+5	−8
■	■	■	■	■	■	■

1 2 3 4 5 6 7 8 9

A FIFTY DOT CHART



1. How many dots in 1 row? in 5 rows?

2. How many dots in all?

   1 row and 2 more dots = 12 dots
   3 rows and 6 more dots = ● dots
   2 rows and 2 more dots = ● dots
   4 rows and 9 more dots = ● dots

3. How many tens? How many ones?

   2 rows + 8 more dots = ▲ tens, ● ones
   4 rows + 7 more dots = ▲ tens, ● ones
   3 rows + 9 more dots = ▲ tens, ● ones
   4 rows + 1 more dot = ▲ tens, ● ones
   3 rows + 2 more dots = ▲ tens, ● ones

4. Show this many dots on the chart.

14	48	25	18	37
45	29	43	23	31

ONE THROUGH FIFTY

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

1. Show what these numerals mean.

21	22	23	24	25	26	27	28	29	30
32	34	36	38	40	42	44	46	48	50
5	10	15	20	25	30	35	40	45	50

2. What are the numbers?

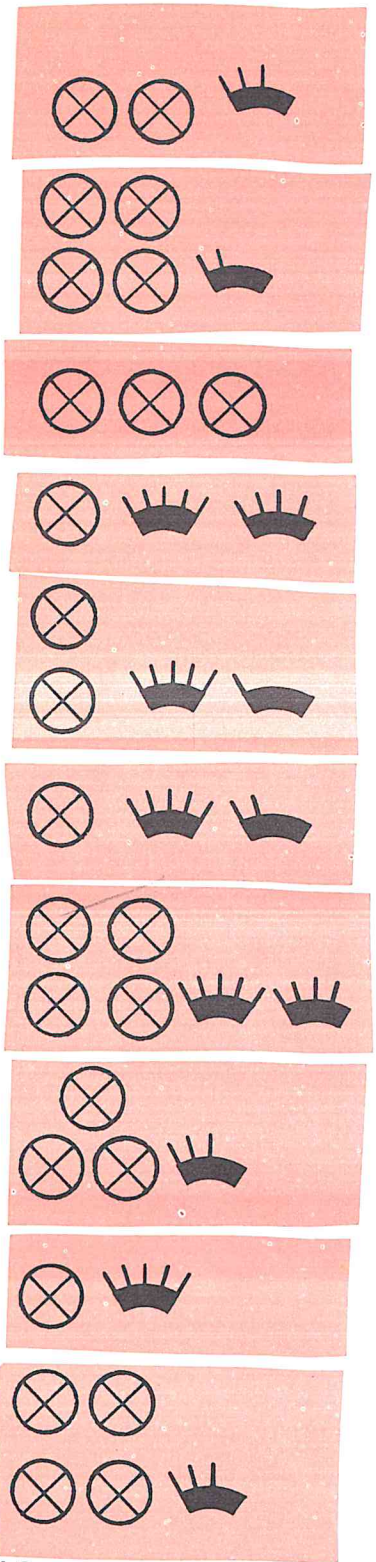
1 ten, 9 ones = 19
3 tens, 7 ones = ●
2 tens, 9 ones = ●
4 tens, 6 ones = ●
2 tens, 1 one = ●
4 tens, 4 ones = ●

3.

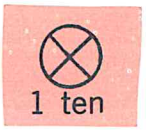
	Tens	Ones
43	▲	■
27	▲	■
38	▲	■
48	▲	■
31	▲	■
40	▲	■

4. Write the missing numerals.

22	24	___	28	___	___	34	___	___	40
50	49	48	___	___	45	___	___	___	___
5	10	15	___	___	___	35	___	___	50



TENS AND ONES



1. Look at the pictures.
   How many tens? How many ones?
   What are the numbers?
   Write the numerals.

2. Draw hand pictures
   for these numerals.

   39 44 21 13 29

3. Find the answers.

   1 ten, 7 ones = 17
   3 tens, 3 ones =
   2 tens, 6 ones =
   3 tens, 0 ones =
   4 tens, 3 ones =
   3 tens, 6 ones =

4. How many?

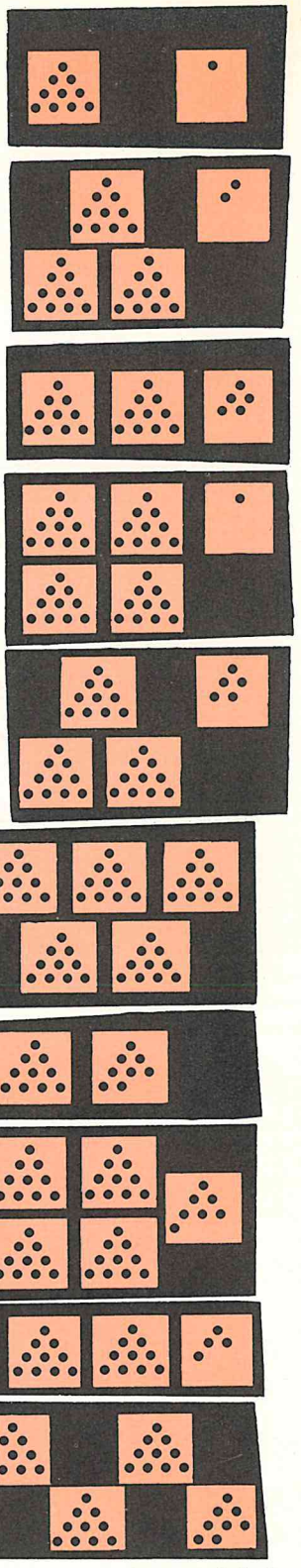
   10 + 9 = 19
   40 + 2 =
   20 + 3 =
   10 + 5 =
   40 + 9 =
   30 + 4 =

5.

Before		After
28	29	▼
▲	36	▼
▲	19	▼
▲	30	▼
▲	49	▼
▲	40	▼

MORE TENS AND ONES

1. Look at the pictures.
How many tens? How many ones?
What are the numbers?
Write the numerals.



2. Find the answers.

3 tens, 2 ones = 32
5 tens, 0 ones = ▼
2 tens, 4 ones = ▼
4 tens, 8 ones = ▼
3 tens, 5 ones = ▼
4 tens, 1 one = ▼
3 tens, 9 ones = ▼
4 tens, 5 ones = ▼

3. How many?

20 + 9 = 29
30 + 8 = ●
20 + 5 = ●
40 + 6 = ●
20 + 2 = ●
10 + 8 = ●
40 + 7 = ●
30 + 6 = ●

4.

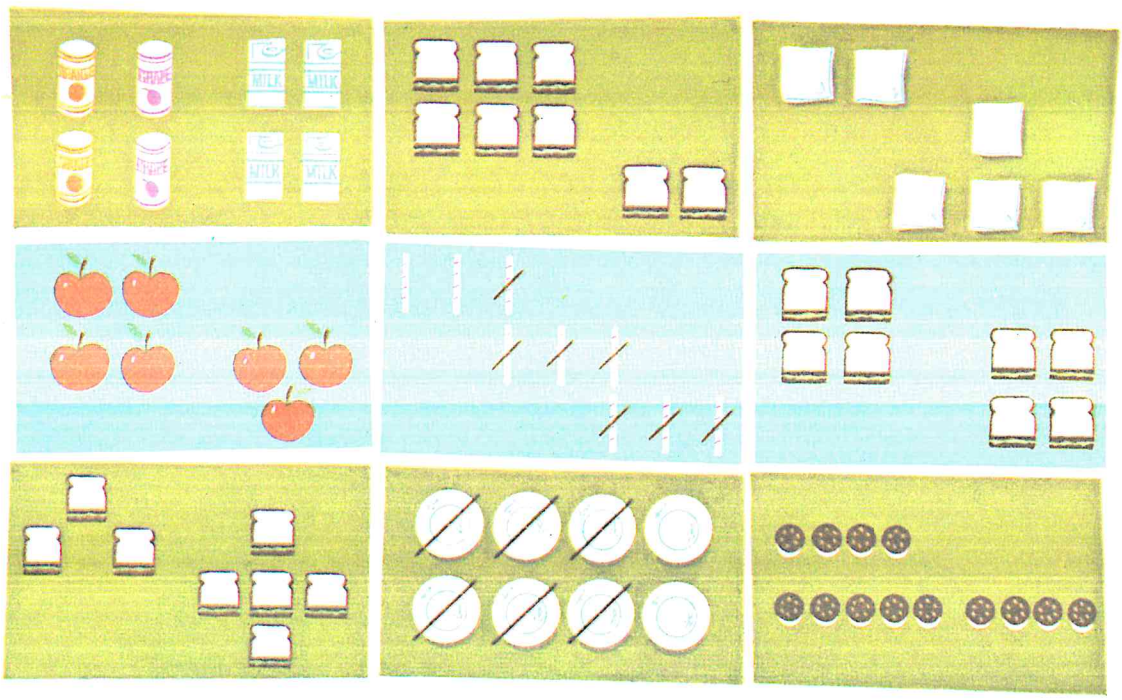
Tens	Ones	
1	6	
4	9	
3	4	
2	1	
4	5	
3	1	

5.

Larger	or	Smaller?
25	26	25S
34	33	
49	50	
11	10	
30	29	
22	23	

NUMBER STORIES

The children are planning a picnic.
The pictures show things they need.
Tell number stories about planning a picnic.



1.

4	9	2	4	8	7	9
+4	−4	+4	+3	−6	+1	−7
■	■	■	■	■	■	■

2.

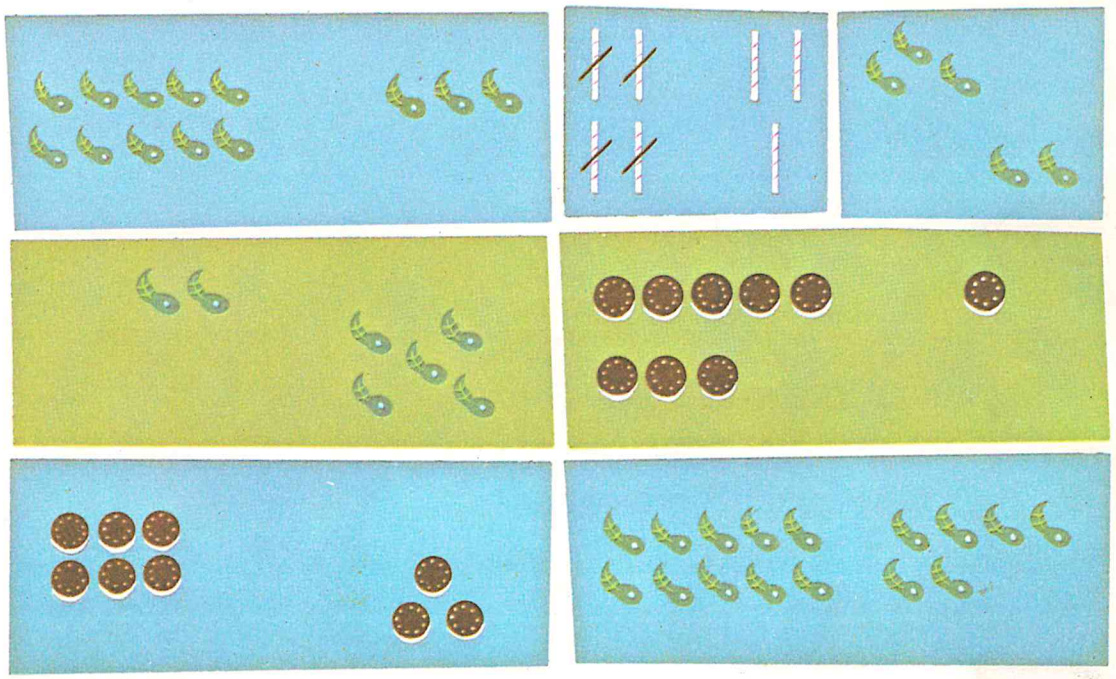
6 + ■ = 8
5 + 4 = ■
2 + 2 + 4 = ■

7 − 2 = ■
8 − 3 = ■
2 fours = ■

3 + ■ = 8
4 + ■ = 9
■ twos = 8

MORE NUMBER STORIES

The picnic was held in the park.
Tell number stories about the picnic.
Use the pictures to help you.



1.

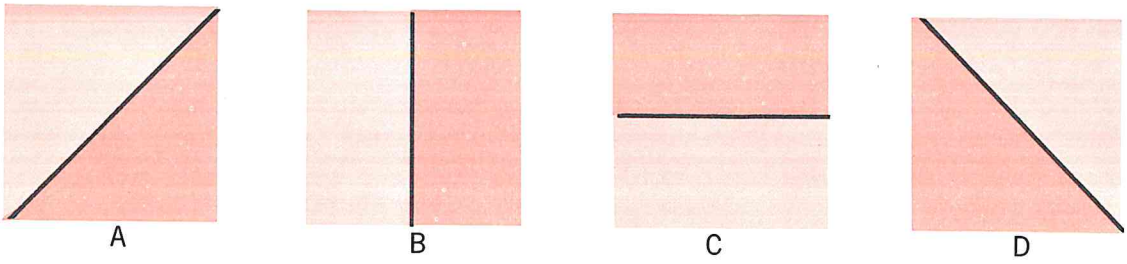
3	8	6	7	6	2	9
+2	−5	+3	−4	−3	+5	−7
■	■	■	■	■	■	■

2.

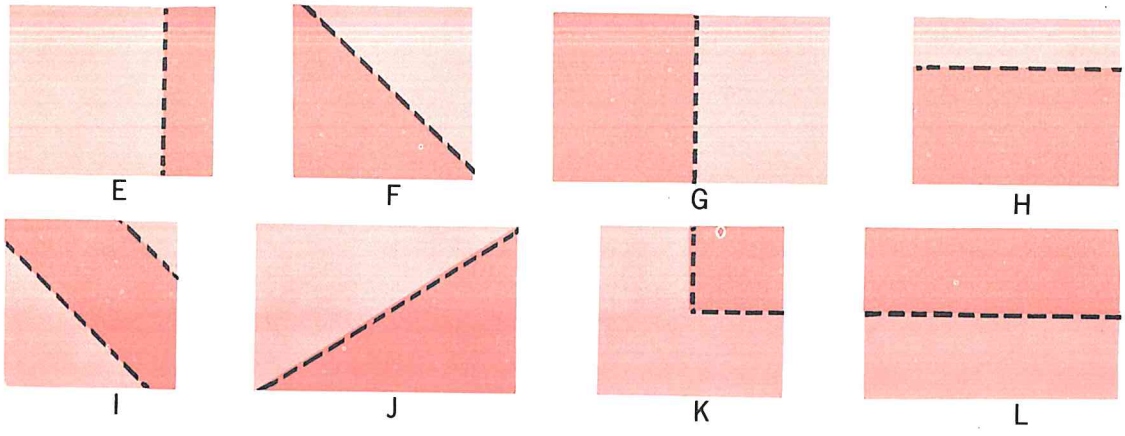
3 + ■ = 6	8 − 2 = ■	7 + ■ = 9
9 − 3 = ■	5 + ■ = 8	7 − 5 = ■
4 twos = ■	2 twos = ■	3 twos = ■

ONE HALF

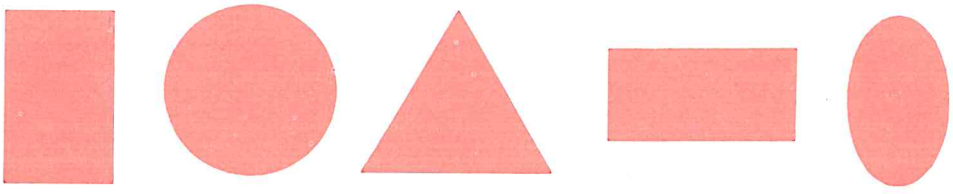
1. Look at pictures **A**, **B**, **C**, and **D**.
   How many parts in each picture?
   Is each part the same size in **A**?
   in **B**? in **C**? in **D**?



2. Which pictures have 2 parts
   that are the same size?
   What is each part called?

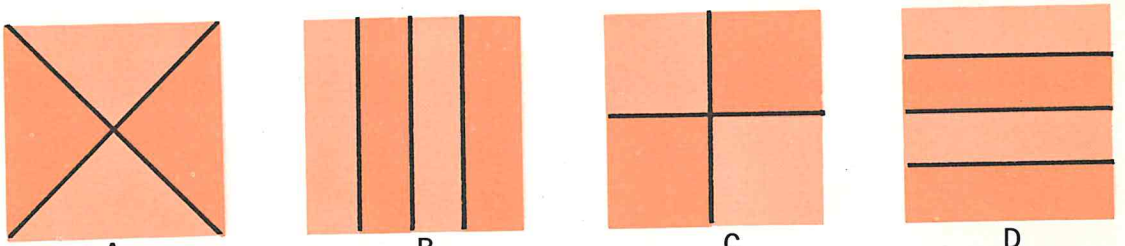


3. Use a marker to show
   one half of each shape.

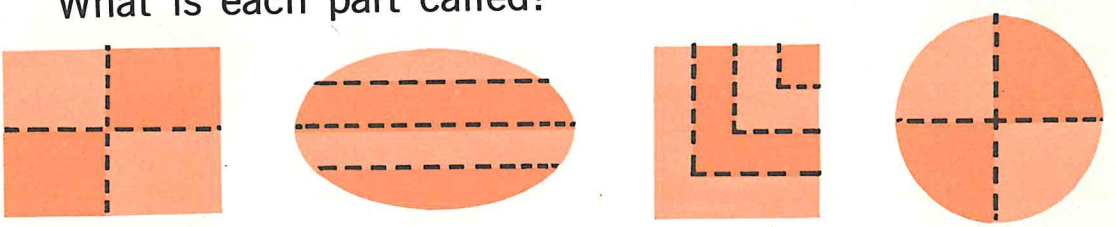


ONE FOURTH

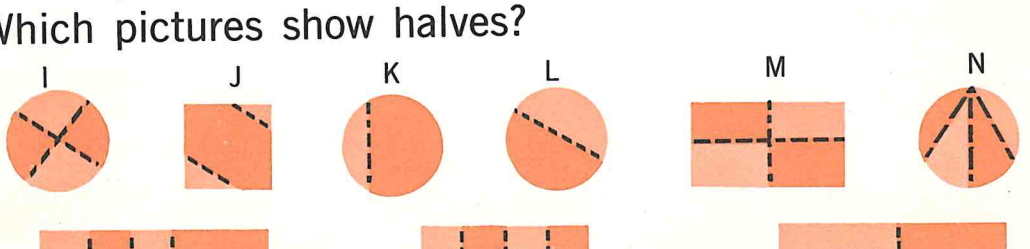
1. Look at pictures **A, B, C,** and **D.**
How many parts in each picture?
Is each part the same size in **A**?
in **B**? in **C**? in **D**?



2. Which pictures have 4 parts
that are the same size?
What is each part called?



3. Which pictures show fourths?
Which pictures show halves?



COUNTING

1. How many shells has Joe?

   Count them by 2's.

   How many shells has Tom?

2. Count Joe's and Tom's shells.

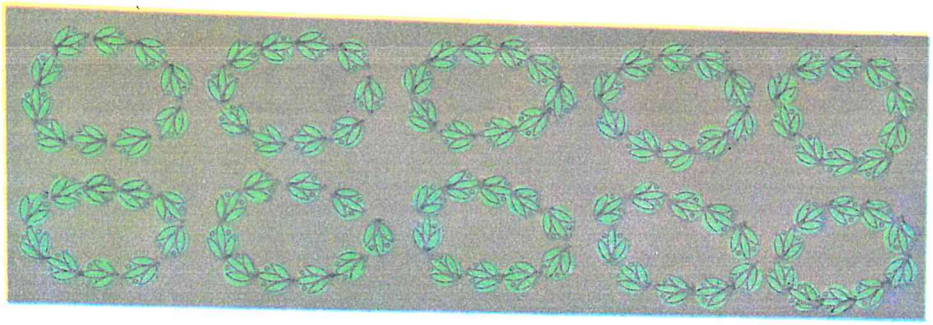
   How many shells in all?

3. How many flowers?

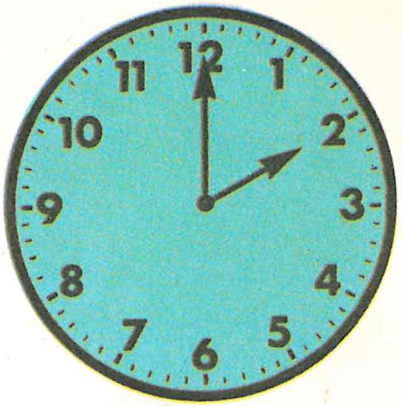
   Count them by 10's.

4. Copy and write the missing numerals.

2	4	6	___	___	12	___	___	___	___
10	20	___	40	___	___	70	___	___	___
18	20	___	24	___	___	___	32	___	___
5	10	15	___	___	30	___	___	___	___
32	34	___	38	___	___	44	___	___	___



TELLING TIME

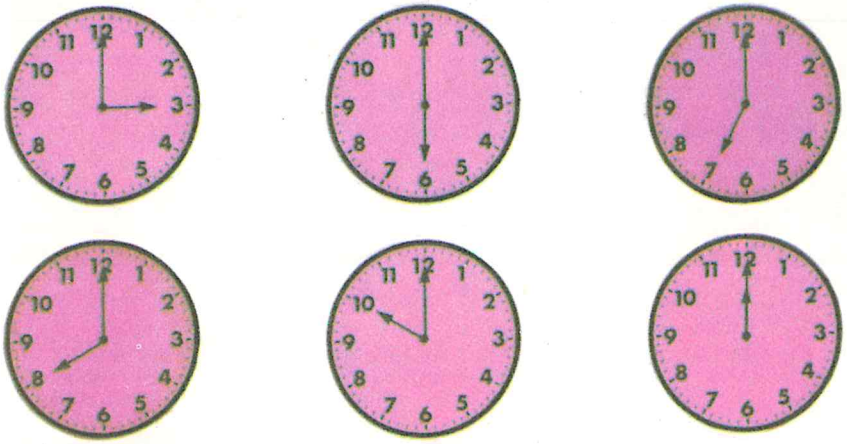


1. Look at the clock.
   What time does it show?

2. Read the numerals on the clock.
   How many spaces between:
   12 and 1? 1 and 2?

3. Use the clock. Count by 5's from 12 to 3;
   from 2 to 6; from 4 to 10.
   Count from 12 around to 12 again.

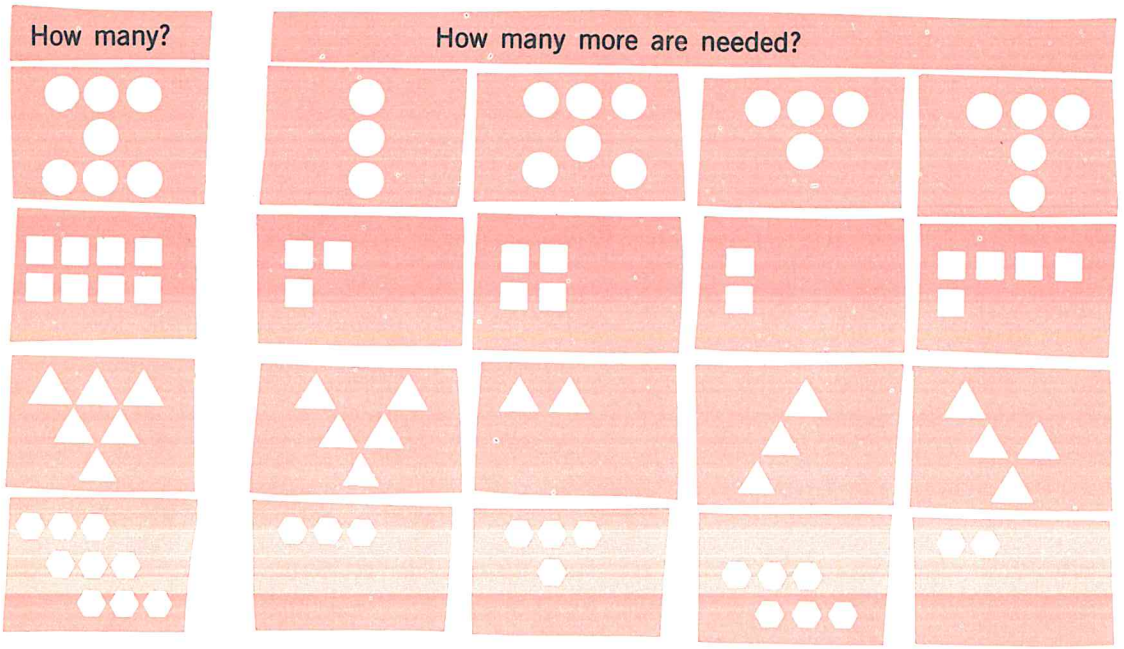
4. What time does each clock show?



5. Where are the hands at these times?
   1 o'clock 4 o'clock 12 o'clock

6. Draw clocks to show these times.
   5 o'clock 9 o'clock 11 o'clock

HOW MANY ARE MISSING?

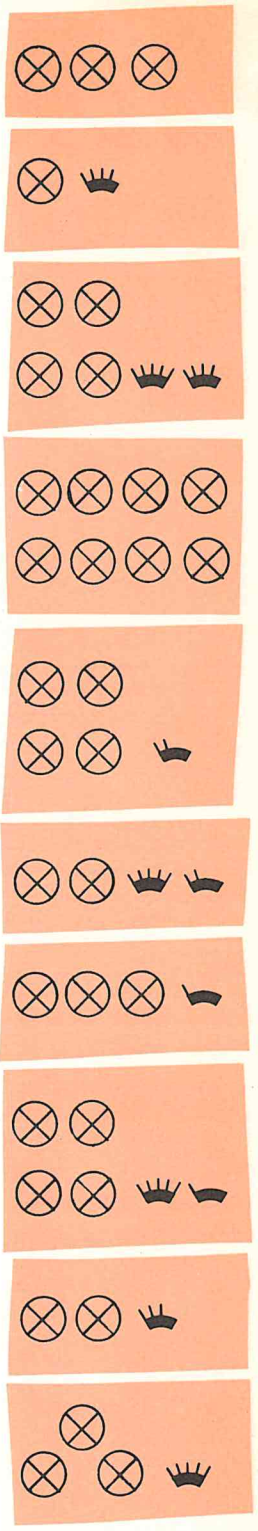


Find the answers.

1.	8	7	9	6	8	9	7
	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$
	4	3	6	5	5	2	5
2.	6	7	8	7	9	8	6
	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$
	3	6	3	4	4	6	1
3.	9	8	6	9	8	6	9
	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$
	3	2	4	7	1	2	5

DO YOU REMEMBER?

1. Look at the hand pictures.
Write a numeral for each picture.



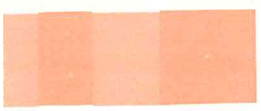
2. Draw hand pictures for these numerals.

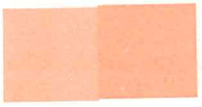
19 50 37 12 70

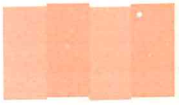
3. What are the numbers?

3 tens, 3 ones = ▲ 1 ten, 7 ones = ▲
2 tens, 8 ones = ▲ 9 tens, 0 ones = ▲
6 tens, 0 ones = ▲ 4 tens, 1 one = ▲
10 tens, 0 ones = ▲ 2 tens, 0 ones = ▲

4. Which picture shows halves?
Which shows fourths?

A 

B 

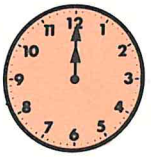
C 

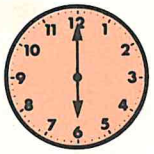
5. Find the answers.

2	9	3	9	2	5
+3	−2	+4	−5	+6	−2
■	■	■	■	■	■

6. What time does each clock show?

A


B


C

PRACTICE

1. Find the answers.

a.

3	7	5	9	8	3	1
+6	−4	+3	−8	−5	+3	+8
☐	☐	☐	☐	☐	☐	☐

b. $4 + 3 =$ ☐ $\quad 6 - 2 =$ ☐ $\quad 4 + 5 =$ ☐

$9 - 3 =$ ☐ $\quad 6 + 2 =$ ☐ $\quad 8 - 1 =$ ☐

2.

Before	After
16	
47	
39	
20	
31	

3.

	Tens	Ones
40		
12		
35		
21		
44		

4. What are the numbers?

4 tens, 7 ones = ●

3 tens, 2 ones = ●

1 ten, 0 ones = ●

4 tens, 9 ones = ●

2 tens, 2 ones = ●

30 and 5 = ●

10 and 3 = ●

40 and 6 = ●

20 and 7 = ●

10 and 6 = ●

5. Write the missing numerals.

a.	16	17	___	19	___	___	22	___	___	___
b.	32	34	36	___	___	42	___	___	___	50
c.	10	20	___	___	50	___	___	___	90	___
d.	50	45	___	35	___	___	20	___	___	5

ENRICHMENT

Copy the numerals in the boxes in 1-5. Write signs between the numerals to make a true number sentence.

8	2	2	4

$8 - 2 = 2 + 4$
and
$8 = 2 + 2 + 4$

1.	6	4	2		2	3	5		9	3	6
2.	8	5	3		3	3	3	9	6	2	4	8
3.	9	7	2		7	3	2	2	2	7	5	4
4.	7	2	5		4	4	2	6	6	3	2	1
5.	9	4	5		2	3	1	6	7	3	5	9

What are the numbers?

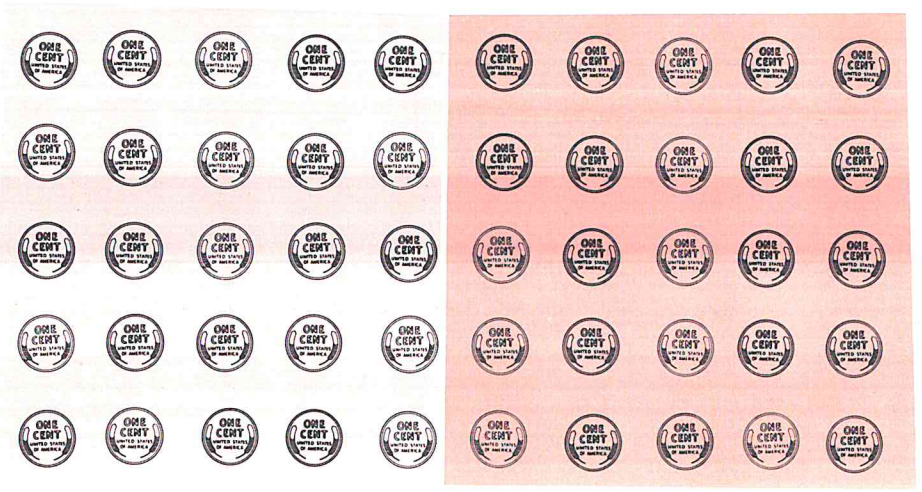
6. I am between 20 and 40. I have 3 tens. I have as many ones as 4 and 5. What am I?

7. I am a teens number. I am smaller than 15. I am the same as 10 and 3. What am I?

8. My tens and ones numbers are the same. I am larger than 20 and smaller than 30. I have as many ones as 1 and 1. What am I?

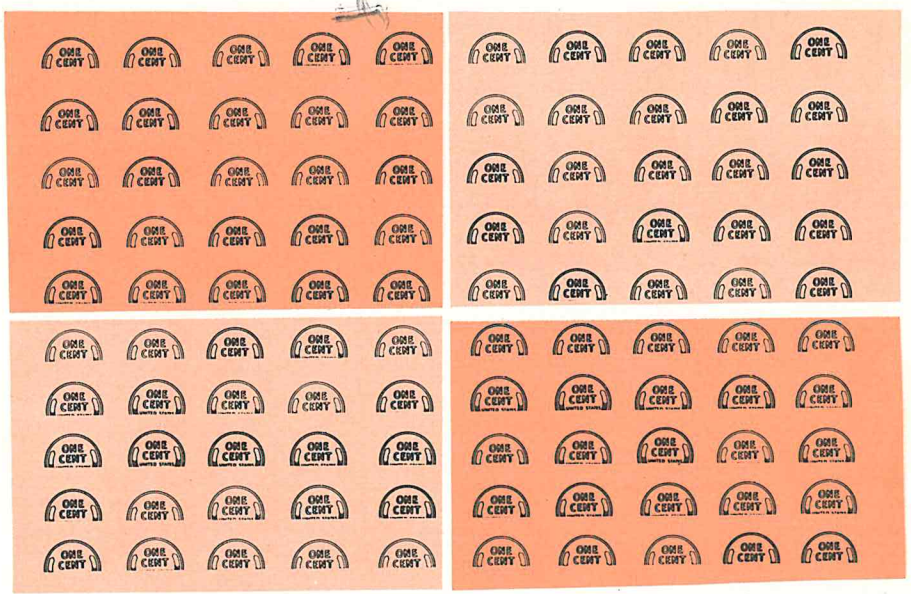
9. I am larger than 50 and smaller than 100. I tell you the number of minutes in an hour. What am I?

PENNIES BY TENS



1. How many pennies in 1 row? in 3 rows? in 5?
2. How many rows of pennies?
   27 = ■ rows and ▲ more pennies
   35 = ■ rows and ▲ more pennies
   20 = ■ rows and ▲ more pennies
   13 = ■ rows and ▲ more pennies
   49 = ■ rows and ▲ more pennies
3. How many pennies?
   4 rows and 5 more pennies = ■
   2 rows and 9 more pennies = ■
   1 row and 2 more pennies = ■
   3 rows and 8 more pennies = ■
   5 rows = ■ 3 rows = ▲
4. Count the pennies by fives.

NUMBERS THROUGH ONE HUNDRED



1. How many pennies in each row? in 10 rows?
2. How many pennies in half a row?
3. Show 50¢. Begin at 55 and count by fives.
4. How many rows of pennies?

   60 = ■ rows 90 = ▲ rows

   65 = ■ rows and ▲ more pennies

   89 = ■ rows and ▲ more pennies

   51 = ■ rows and ▲ more pennies

   73 = ■ rows and ▲ more pennies
5. How many pennies?

   9 rows and 7 more pennies = ■

   7 rows and 2 more pennies = ■

   8 rows and 1 more penny = ■

   9 rows and 9 more pennies = ■
6. Count to 100 by twos; by fives; by tens.

DIMES AND PENNIES

1.

3 dimes = ☐ pennies
5 dimes = ☐ pennies
8 dimes = ☐ pennies
4 dimes = ☐ pennies
9 dimes = ☐ pennies

1 dime equals 10 pennies or ten cents

2.

30 pennies = ☐ dimes
60 pennies = ☐ dimes
100 pennies = ☐ dimes
80 pennies = ☐ dimes
50 pennies = ☐ dimes
70 pennies = ☐ dimes

30 = ☐ tens
60 = ☐ tens
100 = ☐ tens
80 = ☐ tens
50 = ☐ tens
70 = ☐ tens

3.

Pennies		Dimes		Pennies
46	=	4	+	6
100	=	☐	+	△
89	=	☐	+	△
66	=	☐	+	△
21	=	☐	+	△
77	=	☐	+	△
92	=	☐	+	△

4.

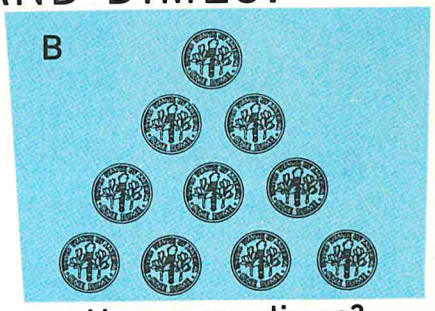
		Tens		Ones
46	=	4	+	6
100	=	☐	+	△
89	=	☐	+	△
66	=	☐	+	△
21	=	☐	+	△
77	=	☐	+	△
92	=	☐	+	△

HOW MANY PENNIES AND DIMES?

A

How many pennies?

B



How many dimes?

1. Show 4 pennies. Show 6 pennies.

$4 + 6 =$ ■ $6 + 4 =$ ■ $10 - 4 =$ ■

2. Show 3 pennies. Show 7 pennies.

$3 + 7 =$ ■ $7 + 3 =$ ■ $10 - 3 =$ ■

3. Show these.

$10 - 2 =$ ■ $10 - 6 =$ ■ $10 - 5 =$ ■

$1 + 9 =$ ■ $2 + 8 =$ ■ $10 - 7 =$ ■

4. Look at picture B. Can you show these?

$2 + 4 =$ ■ $3 + 3 =$ ■ $5 + 3 =$ ■

5. Use your marker to show these.

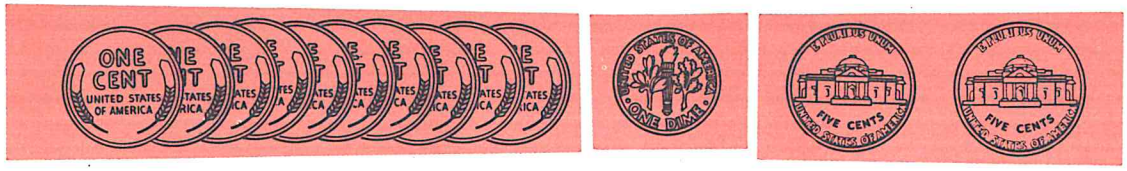
a.

4	5	5	8	6	3	9
+5	+5	+2	+2	+1	+4	+1
■	■	■	■	■	■	■

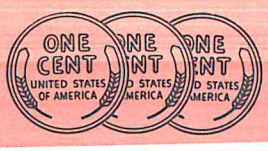
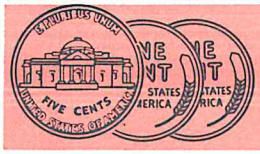
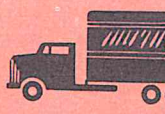
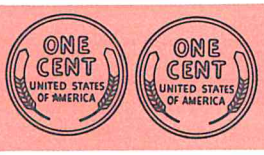
b.

10	9	10	8	10	7	10
− 8	−2	− 3	−5	− 9	−3	− 1
■	■	■	■	■	■	■

HOW MUCH MORE MONEY?

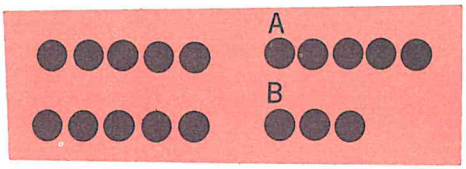


1. How much does each toy cost?
   How much more money do you need?

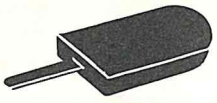
	You Have	You Need
7¢		+ ■ ¢ = ▲ ¢
10¢		+ ■ ¢ = ▲ ¢
10¢		 + ■ ¢ = ▲ ¢
 8¢		+ ■ ¢ = ▲ ¢

2. You have 5¢ and you buy a toy for 5¢.
   How much money is left?
   5 − 5 = 0 4 − 4 = ■ 2 − 2 = ■

3. **A** is ■ more than **B**.



HOW MANY CAN YOU BUY?



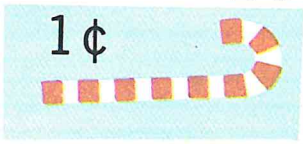
	You Have	You Can Buy
1.	6¢ 9¢	☐ s ☐ s
2.	6¢ 10¢	☐ s ☐ s
3.	8¢ 4¢	☐ s ☐ s
4.	8¢ 4¢	☐ s ☐ s
5.	9¢ 3¢	☐ s ☐ s

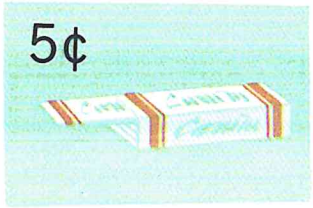
6.

2 fives = ☐
2 threes = ☐
3 twos = ☐
2 fours = ☐

10 = ☐ twos
4 = ☐ twos
8 = ☐ twos
9 = ☐ threes

BUYING MORE THAN ONE THING





1.

2¢	1¢	3¢	4¢	
2¢	4¢	4¢	2¢	
2¢	2¢	1¢	3¢	
¢	¢	¢	¢	

2.

2¢	5¢	2¢	4¢	5¢	6¢
3¢	1¢	2¢	4¢	2¢	2¢
4¢	1¢	3¢	2¢	1¢	2¢
¢	¢	¢	¢	¢	¢

3.

1¢	2¢	3¢	1¢	2¢	6¢
7¢	3¢	3¢	5¢	3¢	1¢
2¢	5¢	3¢	4¢	1¢	2¢
¢	¢	¢	¢	¢	¢

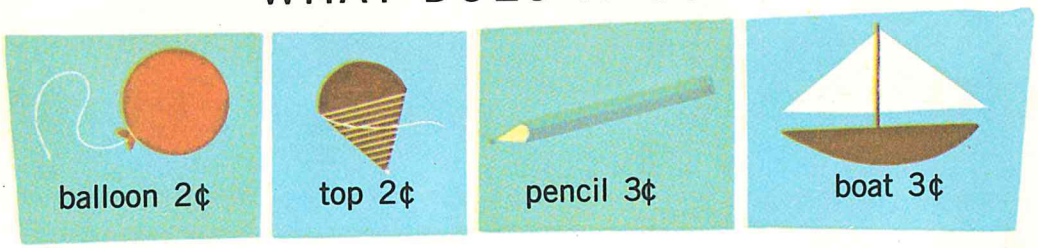
4.

4¢	3¢	2¢	4¢	3¢	1¢
+5¢	+4¢	+5¢	+2¢	+5¢	+5¢
¢	¢	¢	¢	¢	¢

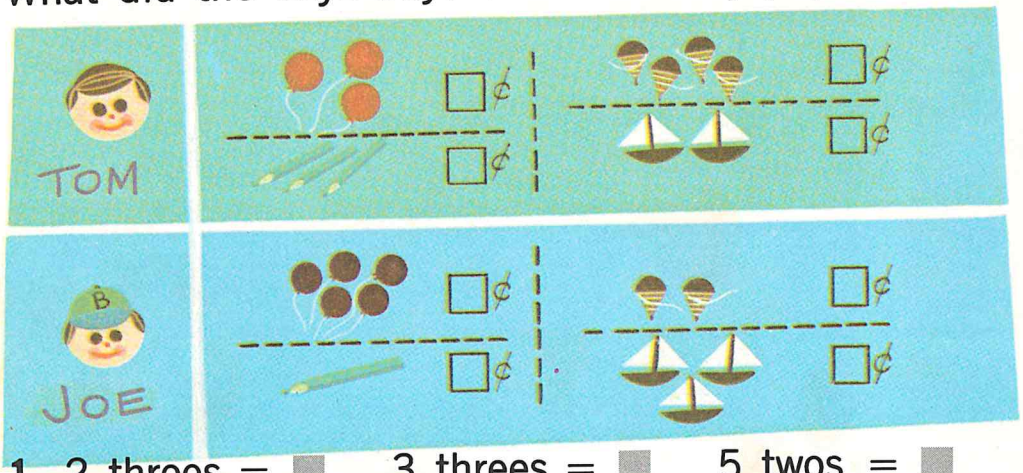
5. What two things can you buy for 8¢ ?

6. What three things can you buy for 9¢ ?

WHAT DOES IT COST?



What did the boys buy? What did they pay?

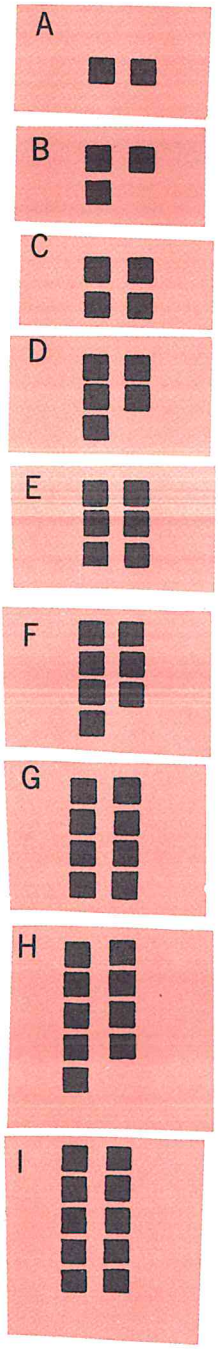


1. 2 threes = ■ 3 threes = ■ 5 twos = ■
4 twos = ■ 2 fives = ■ 2 fours = ■

2. ■ fours = 8 ■ fives = 10 ■ ones = 4
■ threes = 9 ■ twos = 8 ■ fours = 8
■ twos = 6 ■ threes = 6 ■ threes = 9
■ twos = 4 ■ twos = 10 ■ fives = 10

3. Which is less:
6 or 8? 8 or 2? 10 or 6?

ODD AND EVEN



1. How many in each picture?
Can you count the sets by 2's?
Which sets have even numbers?
Which sets have odd numbers?

2.

6 + ▲ = 10	5 + ▲ = 10
2 + ▲ = 9	4 + ▲ = 9
2 + ▲ = 8	7 + ▲ = 8
5 + ▲ = 9	2 + ▲ = 7

3.

6 − ▲ = 2	5 − ▲ = 3
9 − ▲ = 2	10 − ▲ = 4
10 − ▲ = 7	9 − ▲ = 6

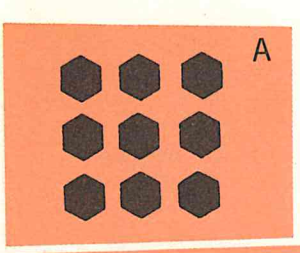
4.

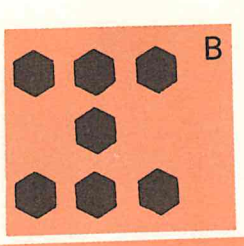
3	5	7	3	6	3
+5	+3	+3	+7	+3	+6
▲	▲	▲	▲	▲	▲

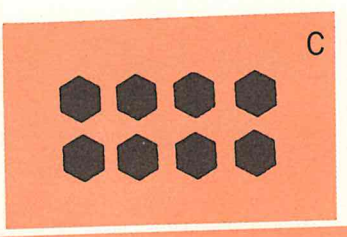
5. Find some more pairs of facts.

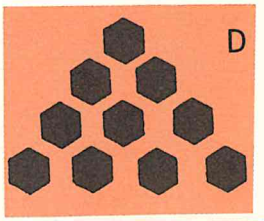
7	2	9	1	4	2
+2	+ ▲	+1	+ ▲	+2	+ ▲
▼	9	▼	10	▼	6

USING SETS TO FIND ANSWERS









Find a picture for each example.
Read the picture this way:

2 and 5 are 7.
7 take away 5 is 2.

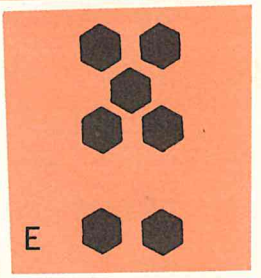
1.

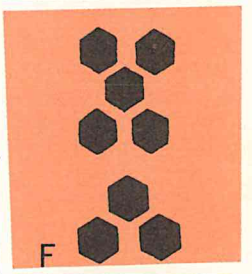
3	4	3	2	3
+5	+3	+6	+6	+7
▲	▲	▲	▲	▲
8	2	1	2	6
+2	+5	+8	+7	+2
▲	▲	▲	▲	▲

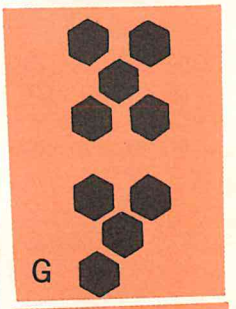
2.

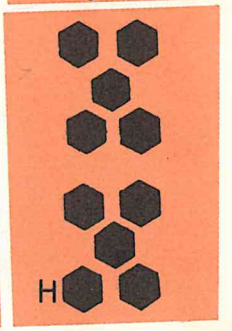
7	10	8	10	9
−6	− 8	−2	− 4	−4
▲	▲	▲	▲	▲
10	9	10	8	10
− 9	−3	− 7	−6	− 2
▲	▲	▲	▲	▲

3. 9 − 6 = ▲ 7 − 4 = ▲





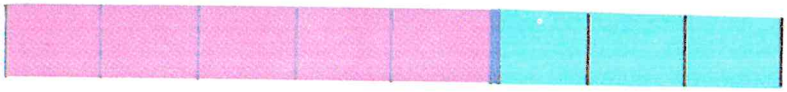




PRACTICING WITH FACTS

A

B



1. Which picture shows $5 + \square = 7$?

2. Use picture D to show $10 - 5 = \square$.

Find the answers. Use the pictures to help.

3.

5	4	1	2	7	4	7
$+\square$	$+\square$	$+\square$	$+\square$	$+\square$	$+\square$	$+\square$
8	10	7	10	9	7	10

4.

8	6	1	6	8	6	5
$+\square$	$+\square$	$+\square$	$+\square$	$+\square$	$+\square$	$+\square$
9	10	10	9	10	8	9

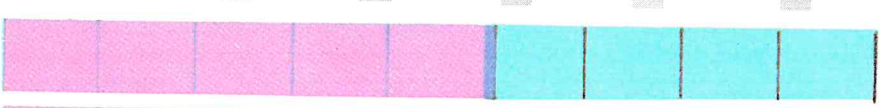
5.

8	9	8	10	9	7	10
$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$	$-\square$
3	4	7	4	2	5	7

6.

7	8	10	8	10	9	7
-7	-2	-2	-7	-7	-8	-3
$\square$	$\square$	$\square$	$\square$	$\square$	$\square$	$\square$

C



D

ANSWERS OF ONE MORE OR ONE LESS

Let the doubles help you.

1.

5	5	4	4	3	3
+5	+4	+4	+3	+3	+2
■	■	■	■	■	■

2.

2	1	3	2	4	3
+2	+2	+3	+3	+4	+4
■	■	■	■	■	■

3.

10	10	8	8	6	6
− 5	− 4	−4	−3	−3	−2
■	■	■	■	■	■

What is the answer if you add 1?

4.

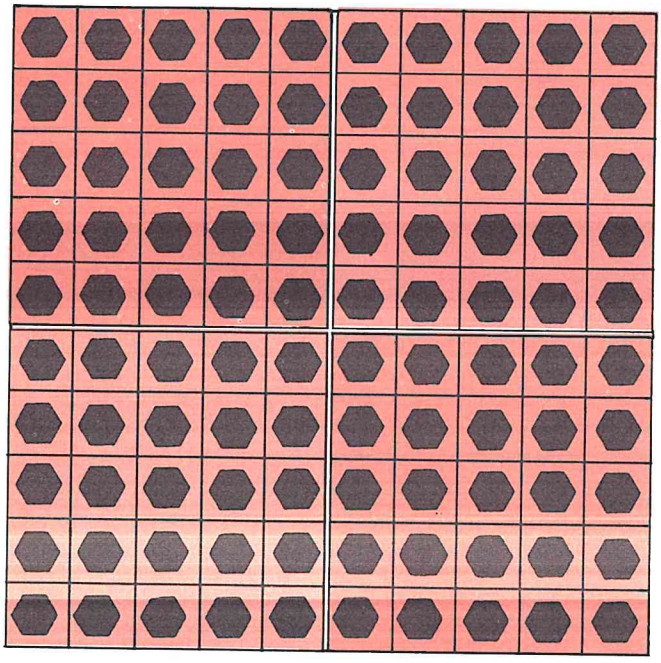
3	4	6	9	8	5	7
+1	+1	+1	+1	+1	+1	+1
■	■	■	■	■	■	■

What is the answer if you take away 1?

5.

6	5	8	7	10	9	4
−1	−1	−1	−1	− 1	−1	−1
■	■	■	■	■	■	■

PRACTICE



Use the pictures if you need help.

1.
70 = ▢ tens
40 = ▢ tens
100 = ▢ tens
5 tens = ▢
8 tens = ▢
1 ten = ▢
6 tens = ▢
2 tens = ▢
9 tens = ▢

2.
6 tens + 4 ones = ▢
5 tens + 5 ones = ▢
1 ten + 9 ones = ▢
9 tens + 4 ones = ▢
8 tens + 8 ones = ▢

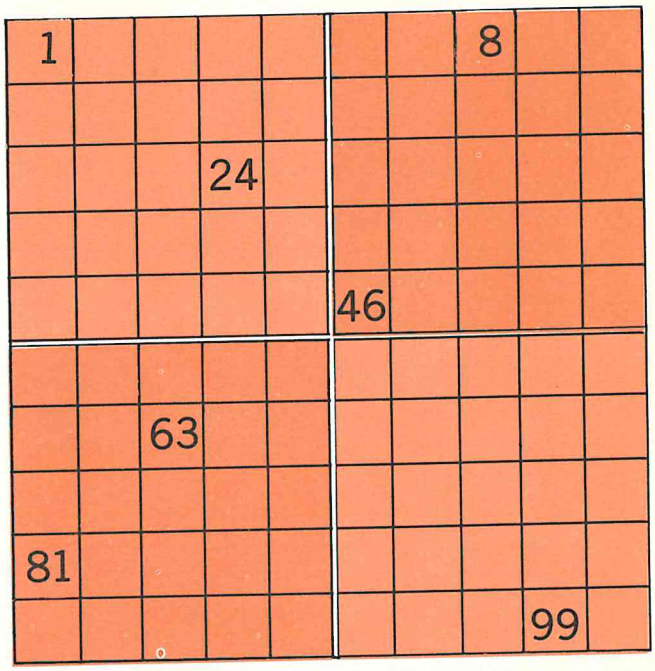
83 = ▢ tens + ▢ ones
71 = ▢ tens + ▢ ones
30 = ▢ tens + ▢ ones
69 = ▢ tens + ▢ ones
98 = ▢ tens + ▢ ones

3.
10¢ − 8¢ = ▢ ¢
9¢ − 5¢ = ▢ ¢
10¢ − 1¢ = ▢ ¢
9¢ − 6¢ = ▢ ¢
10¢ − 9¢ = ▢ ¢

5¢ + 2¢ = ▢ ¢
2¢ + 8¢ = ▢ ¢
5¢ + 4¢ = ▢ ¢
3¢ + 7¢ = ▢ ¢
6¢ + 3¢ = ▢ ¢

WRITING NUMERALS

How many squares
in each row?
Show 14, 22, 70, 67.



1. 2 tens = ■
5 tens = ■
4 tens = ■
9 tens = ■
6 tens = ■
8 tens = ■
10 tens = ■

2. 5 tens, 3 ones = ■ 9 tens, 6 ones = ■
9 tens, 9 ones = ■ 6 tens, 8 ones = ■
8 tens, 7 ones = ■ 7 tens, 5 ones = ■

3. What number comes just before:
55? 64? 72? 90? 88?

4. What number comes just after:
99? 56? 78? 85? 69?

5. Write the missing numerals.
91 92 93 ___ ___ ___ 97 ___ ___ ___

DO YOU REMEMBER?

1.

a. 3 threes = ☐
2 fours = ☐
2 threes = ☐
4 twos = ☐
2 twos = ☐
5 twos = ☐

b. ☐ + 7 = 10
☐ + 5 = 7
☐ + 2 = 8
☐ + 6 = 10
☐ + 5 = 9
☐ + 2 = 9

2.

a. 10 − ☐ = 2
8 − ☐ = 3
7 − ☐ = 5
10 − ☐ = 4
9 − ☐ = 7

b. 8 − 6 = ☐
10 − 3 = ☐
9 − 6 = ☐
10 − 7 = ☐
9 − 4 = ☐

3. How many more is 10 than 9?
How many more is 8 than 4?
How many more is 9 than 3?

4. How many less is 3 than 7?
How many less is 5 than 10?
How many less is 6 than 8?

5.

a. 7¢ + 3¢ = ☐¢
3¢ + 5¢ = ☐¢

b. 10¢ − 2¢ = ☐¢
8¢ − 4¢ = ☐¢

6. **a.**

= ■ ¢

= ■ ¢

b.

= ■ ¢

= ■ ¢

7.

61 = ■ tens, ▲ ones	74 = ■ tens, ▲ ones
84 = ■ tens, ▲ ones	91 = ■ tens, ▲ ones
78 = ■ tens, ▲ ones	86 = ■ tens, ▲ ones
93 = ■ tens, ▲ ones	57 = ■ tens, ▲ ones
52 = ■ tens, ▲ ones	44 = ■ tens, ▲ ones

8.

9 tens, 7 ones = ■	5 tens, 9 ones = ■
8 tens, 2 ones = ■	1 ten, 4 ones = ■
10 tens = ■	8 tens, 5 ones = ■
7 tens, 6 ones = ■	3 tens, 9 ones = ■
9 tens, 5 ones = ■	6 tens, 3 ones = ■

9.

6¢	1¢	2¢	2¢	1¢	4¢	3¢
3¢	5¢	6¢	3¢	2¢	4¢	6¢
1¢	4¢	1¢	3¢	4¢	2¢	1¢
■ ¢	■ ¢	■ ¢	■ ¢	■ ¢	■ ¢	■ ¢

10.

8	10	6	9	6	7	10
−7	− 5	−3	−8	−6	−1	− 4
■	■	■	■	■	■	■

DO YOU KNOW?

1.	$\begin{array}{r} 2 \\ +3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 5 \\ +3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 3 \\ +4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 4 \\ +4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 1 \\ +6 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 5 \\ +1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 2 \\ +5 \\ \hline \blacksquare \end{array}$
2.	$\begin{array}{r} 1 \\ +7 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 2 \\ +6 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 4 \\ +2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 1 \\ +4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 4 \\ +3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 7 \\ +1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 2 \\ +4 \\ \hline \blacksquare \end{array}$
3.	$\begin{array}{r} 1 \\ +5 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 3 \\ +2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 3 \\ +5 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ +1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 3 \\ +3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 5 \\ +2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ +2 \\ \hline \blacksquare \end{array}$
4.	$\begin{array}{r} 5 \\ -4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 7 \\ -2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ -4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ -2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 7 \\ -5 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -7 \\ \hline \blacksquare \end{array}$
5.	$\begin{array}{r} 7 \\ -3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ -3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ -1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 5 \\ -3 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -4 \\ \hline \blacksquare \end{array}$
6.	$\begin{array}{r} 7 \\ -1 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -5 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 5 \\ -2 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 8 \\ -6 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 6 \\ -5 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 7 \\ -4 \\ \hline \blacksquare \end{array}$	$\begin{array}{r} 7 \\ -6 \\ \hline \blacksquare \end{array}$

ENRICHMENT

Follow the directions above the columns.

Find the answers.

1.

	Start With	Add	Take Away	Add	Answer
a.	4	4 − 2	1	3	■
b.	2	3 + 1	2	5	■
c.	5	6 − 3	4	1	■
d.	8	9 − 7	5	5	■
e.	9	10 − 9	4	2	■

2.

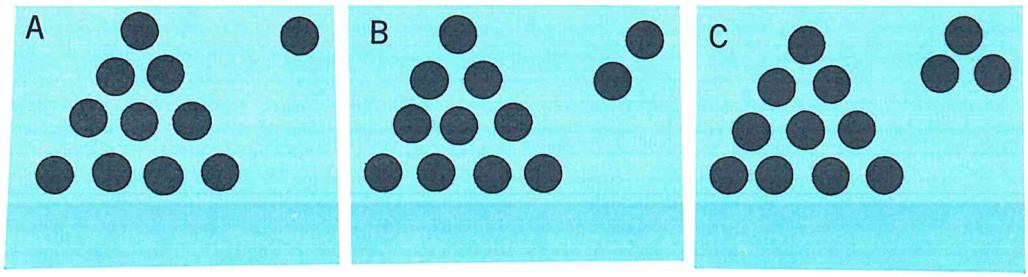
	Start With	Take Away	Take Away	Add	Answer
a.	10 − 3	3	1	2	■
b.	6 + 3	4	2	6	■
c.	5 + 4	2	4	4	■
d.	7 − 4	1	1	8	■
e.	4 + 4	3	2	1	■

3. Find the answers.

5 + 3 = ■ ↓ ■ − 2 = ▲ ↓ ▲ + 1 = ●

5 + 5 = ■ ↓ ■ − 8 = ▲ ↓ ▲ + 7 = ●

ELEVEN, TWELVE, AND THIRTEEN



1. Use a marker on picture **A**.

Show $9 + 1 = 10$ $\quad 10 + 1 = 11$

so $9 + 2 = 11$ $\quad 2 + 9 =$ ▢

What is $11 - 2$?

Show $11 - 1 = 10$ $\quad 10 - 1 = 9$

so $11 - 2 = 9$ $\quad 11 - 9 =$ ▢

2. Picture **B**:

$9 + 3 =$ ▢ $\quad 10 + 2 =$ ▢ $\quad 12 - 2 =$ ▢

$12 - 3 =$ ▢ $\quad 8 + 4 =$ ▢ $\quad 7 + 5 =$ ▢

$12 - 4 =$ ▢ $\quad 12 - 5 =$ ▢

3. Picture **C**:

$9 + 4 =$ ▢ $\quad 10 + 3 =$ ▢ $\quad 13 - 3 =$ ▢

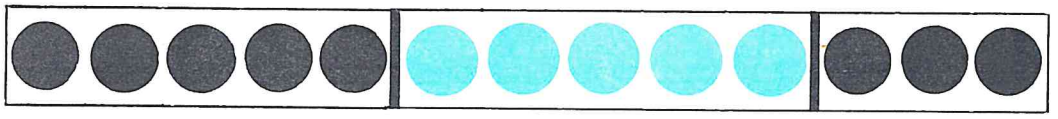
$8 + 5 =$ ▢ $\quad 7 + 6 =$ ▢

$13 - 4 =$ ▢ $\quad 13 - 5 =$ ▢ $\quad 13 - 6 =$ ▢

4. Use a marker on picture **A**.

$8 + 3 =$ ▢ $\quad 7 + 4 =$ ▢ $\quad 6 + 5 =$ ▢

$11 - 5 =$ ▢ $\quad 11 - 4 =$ ▢ $\quad 11 - 3 =$ ▢



USING TEN TO FIND ANSWERS

1. $4 + 9 = \square$ Find a picture to show $4 + 10$.

$4 + 10 = 14$

so $4 + 9 = 13$

Find			
$4 + 8$	$4 + 10 = \square$	so	$4 + 8 = \square$
$3 + 9$	$3 + 10 = \square$	so	$3 + 9 = \square$
$9 + 4$	$10 + 4 = \square$	so	$9 + 4 = \square$
$3 + 8$	$3 + 10 = \square$	so	$3 + 8 = \square$

2. Find

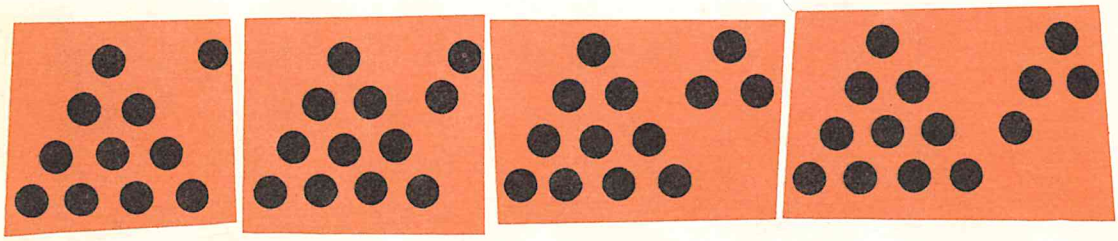
$12 - 8$	$12 - 10 = \square$	so $12 - 8 = \square$
$13 - 9$	$13 - 10 = \square$	so $13 - 9 = \square$
$12 - 9$	$12 - 10 = \square$	so $12 - 9 = \square$
$11 - 8$	$11 - 10 = \square$	so $11 - 8 = \square$

3.

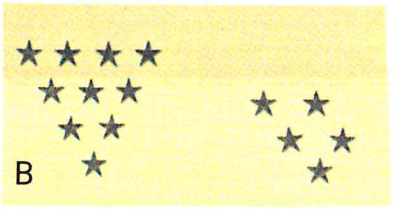
$11 = 4 + \square$	$11 = 5 + \square$	$11 = 7 + \square$
$12 = 6 + \square$	$12 = 5 + \square$	$12 = 7 + \square$
$13 = 8 + \square$	$13 = 5 + \square$	$13 = 6 + \square$

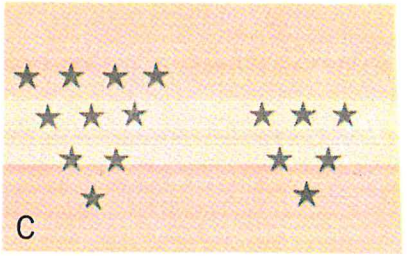
4.

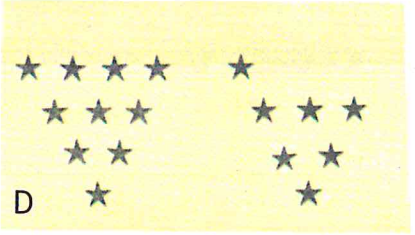
$11 - 10 = \square$	$11 - 7 = \square$	$11 - 6 = \square$
$12 - 10 = \square$	$12 - 7 = \square$	$12 - 6 = \square$
$13 - 10 = \square$	$13 - 8 = \square$	$13 - 7 = \square$

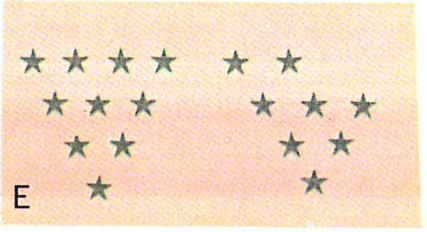


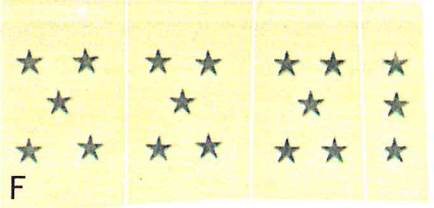
FOURTEEN THROUGH EIGHTEEN











1. How many stars in **A**? **B**? **C**?

Use the boxes to show:

$10 + 5 =$ ☐ $\quad 15 - 5 =$ ☐

$10 + 4 =$ ☐ $\quad 14 - 4 =$ ☐

$10 + 6 =$ ☐ $\quad 16 - 6 =$ ☐

How many stars in **D**? **E**? **F**?

2. Use box **B** to show:

$10 + 5 =$ ☐ $\quad 9 + 6 =$ ☐

$5 + 10 =$ ☐ $\quad 6 + 9 =$ ☐

$15 - 5 =$ ☐ $\quad 15 - 6 =$ ☐

Show some more facts for 15.

3. Use the pictures to help you.

a. $10 + 5 =$ ☐ $\quad 9 + 5 =$ ☐

$10 + 8 =$ ☐ $\quad 9 + 8 =$ ☐

$10 + 6 =$ ☐ $\quad 9 + 6 =$ ☐

$10 + 7 =$ ☐ $\quad 9 + 7 =$ ☐

b. $18 - 8 =$ ☐ $\quad 18 - 9 =$ ☐

$14 - 4 =$ ☐ $\quad 14 - 5 =$ ☐

$16 - 6 =$ ☐ $\quad 16 - 7 =$ ☐

$17 - 7 =$ ☐ $\quad 17 - 8 =$ ☐

USING TEEN NUMBERS AND TEN

1. $10 + 6 = \square + 10$ $\quad$ $10 + 8 = \square + 10$

$5 + 10 = \square$ $\quad$ $5 + 9 = \square$

$7 + 10 = \square$ $\quad$ $7 + 9 = \square$

2. **a.** $16 - 10 = \square$ $\quad$ **b.** $14 - 10 = \square$

$16 - 9 = \square$ $\quad$ $14 - 9 = \square$

c. $15 - 10 = \square$ $\quad$ **d.** $17 - 10 = \square$ $\quad$ **e.** $18 - 10 = \square$

$15 - 9 = \square$ $\quad$ $17 - 9 = \square$ $\quad$ $18 - 9 = \square$

3. Use the picture line to help you.

a. $14 - 8 = \square$ $\quad$ $15 - 7 = \square$ $\quad$ $14 - 6 = \square$

$15 - 8 = \square$ $\quad$ $16 - 8 = \square$ $\quad$ $14 - 7 = \square$

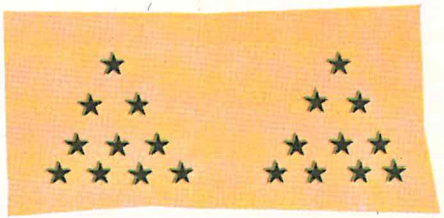
b. $7 + 8 = \square$ $\quad$ $8 + 9 = \square$ $\quad$ $8 + 6 = \square$

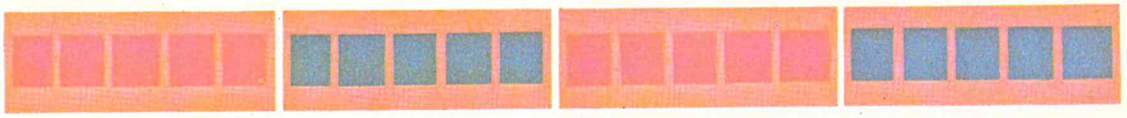
$6 + 8 = \square$ $\quad$ $8 + 7 = \square$ $\quad$ $6 + 9 = \square$

4. $14 = 7 + \blacktriangledown$

$16 = 8 + \blacktriangledown$

$18 = 9 + \blacktriangledown$

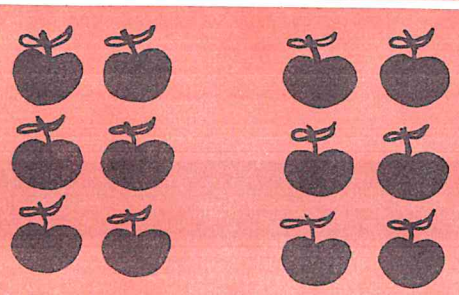




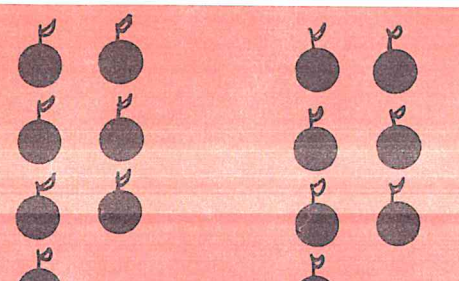
USING DOUBLES TO FIND ANSWERS

How many?

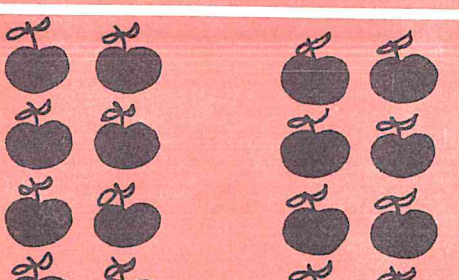
A



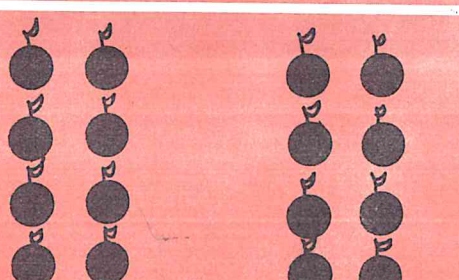
B



C



D



1. $\begin{array}{r} 6 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +\square \\ \hline 13 \end{array}$ $\begin{array}{r} 6 \\ +5 \\ \hline \end{array}$

2. $\begin{array}{r} 7 \\ +7 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +\square \\ \hline 15 \end{array}$ $\begin{array}{r} 7 \\ +6 \\ \hline \end{array}$

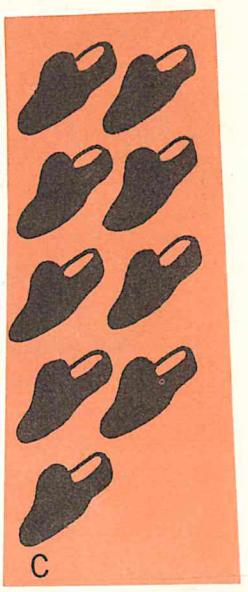
3. $\begin{array}{r} 8 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\square \\ \hline 17 \end{array}$ $\begin{array}{r} 8 \\ +7 \\ \hline \end{array}$

4. $\begin{array}{r} 9 \\ +9 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\square \\ \hline 17 \end{array}$ $\begin{array}{r} 8 \\ +9 \\ \hline \end{array}$

5. $12 = \square + \square$
   $14 = \square + \square$
   $16 = \square + \square$
   $18 = \square + \square$

6. $\begin{array}{r} 12 \\ -6 \\ \hline \end{array}$ $\begin{array}{r} 14 \\ -7 \\ \hline \end{array}$ $\begin{array}{r} 16 \\ -8 \\ \hline \end{array}$ $\begin{array}{r} 18 \\ -9 \\ \hline \end{array}$

COUNTING BY TWOS



1. Count the things in **A**, **B**, and **C** by 2's.
2. Use a marker on picture **A**.
   Cover 2 mittens. ■ − 2 = ▲
   Cover 2 more. ▲ − 2 = ▼
   How many 2's can you take away?

3.

6	3	4	7	5	2
+2	+2	+2	+2	+2	+2
■	■	■	■	■	■

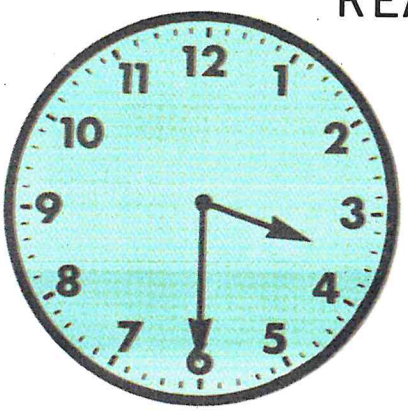
4.

8	4	7	6	9	5
−2	−2	−2	−2	−2	−2
■	■	■	■	■	■

5. Write the missing numerals.

2	4	___	8	___	___	___
16	___	12	10	___	___	___
3	5	7	___	11	___	15
13	11	___	___	5	___	___

READING THE CLOCK

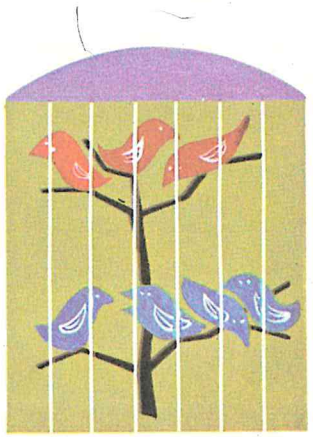


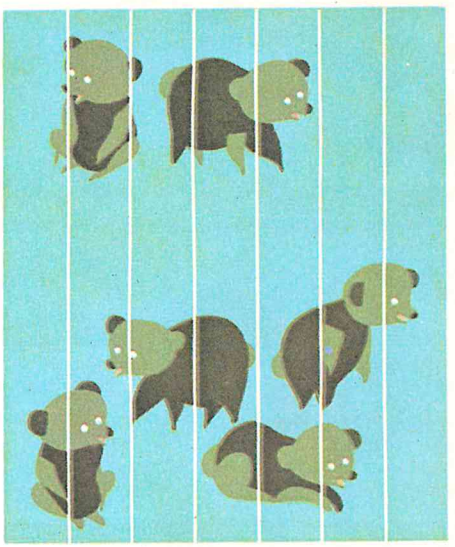
1. Find the long hand.
   Where does it point?
   Find the short hand.
   Where does it point?
   What time is it?

2. Tom found a robin at 9:00.
   Find a clock that says 9:00.
   How many minutes from 9:00
   to 9:30? Count by 5's from
   10:00 to 10:30. Read the clocks.

3. Where does the long hand point?
   Tell how to show 11:30; 2:00; 6:00; 8:30.

USING FACTS IN PROBLEMS



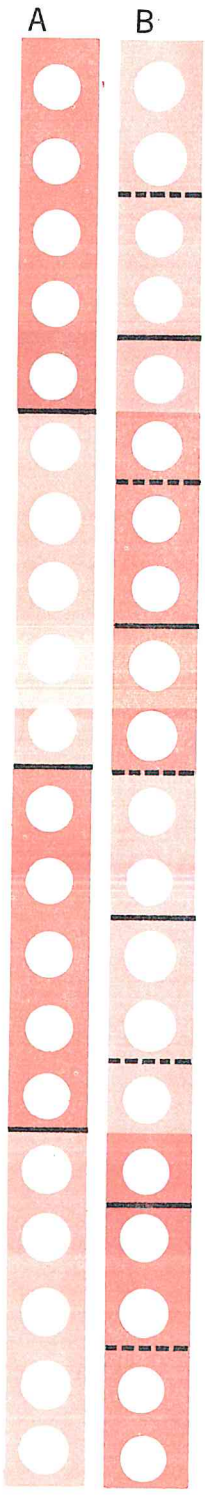


1. Tell a story about the monkeys.
   How many in the tree? How many in all?

2. Are there as many red birds as blue birds? How can you tell?
   Write the number sentence.

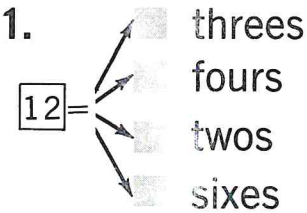
3. Find 2 bears. Find 4 more bears.
   Are $2 + 4$ as many as $4 + 2$?
   If there were 2 more bears, how many would there be in all?

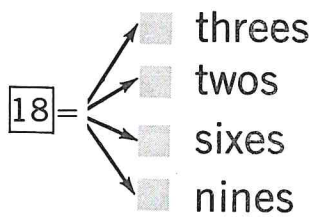
4. Are there more monkeys than birds?
   How many more?

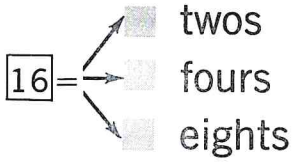


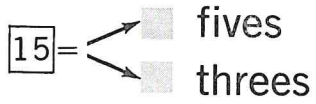
USING DOT LINES

1.









2.

10 = ⬡ twos
10 = ⬡ fives

8 = ⬡ twos
8 = ⬡ fours

6 = ⬡ threes
6 = ⬡ twos

14 = ⬡ twos
14 = ⬡ sevens

3.

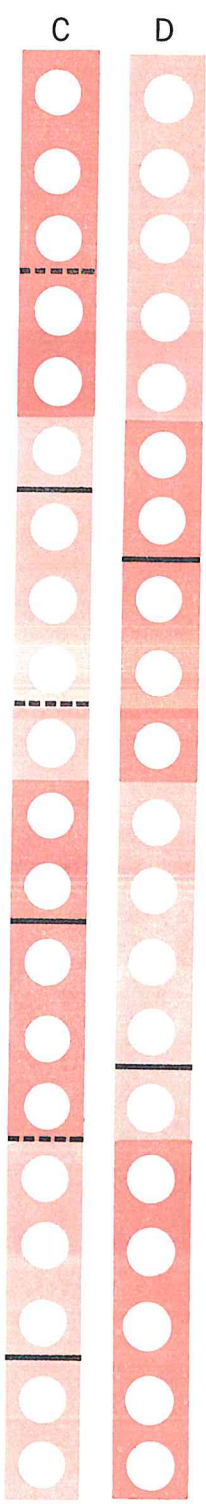
2 fives = ⬡
3 fours = ⬡
6 twos = ⬡
2 eights = ⬡

6 threes = ⬡
4 fours = ⬡
2 sixes = ⬡
4 threes = ⬡

4.

7 twos = ⬡
5 threes = ⬡
9 twos = ⬡
2 sevens = ⬡

3 fives = ⬡
3 sixes = ⬡
2 nines = ⬡
8 twos = ⬡



WORKING WITH NUMBERS

1.

9	8	5	9	6	7	6
+6	+4	+8	+5	+5	+9	+8
■	■	■	■	■	■	■

2.

11	15	13	18	12	14	11
− 5	− 8	− 9	− 9	− 5	− 9	− 3
■	■	■	■	■	■	■

3.

14	3	11	9	11	16	4
− 6	+9	− 4	+2	− 6	− 7	+9
■	■	■	■	■	■	■

4.

7 + 3 = ■	11 − 7 = ■	7 + ■ = 14
8 + 3 = ■	12 − 7 = ■	8 + ■ = 16
9 + 3 = ■	13 − 7 = ■	9 + ■ = 18

5.

10 − 2 = ■	4 + 7 = ■	13 − 4 = ■
11 − 2 = ■	5 + 7 = ■	14 − 5 = ■
12 − 2 = ■	6 + 7 = ■	15 − 6 = ■

6.

■ sevens = 14	3 sixes = ■	■ threes = 15
■ nines = 18	2 fives = ■	■ twos = 12
■ fours = 16	9 twos = ■	■ eights = 16

PUTTING FACTS TO WORK

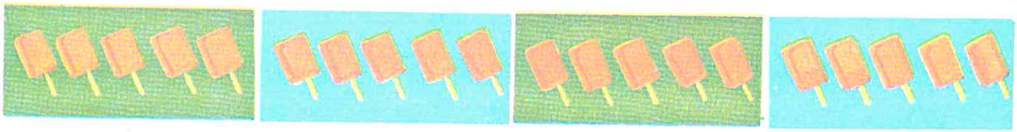
1. Is there a box of pudding mix for each child?
   How many measuring cups are there?
   How many cups will each child have?
   ▢ fives = 10

2. Each box of pudding makes 6 ice-cream pops.
   How many more pans do they need?
   One child can make 6 pops.
   How many pops can two children make?

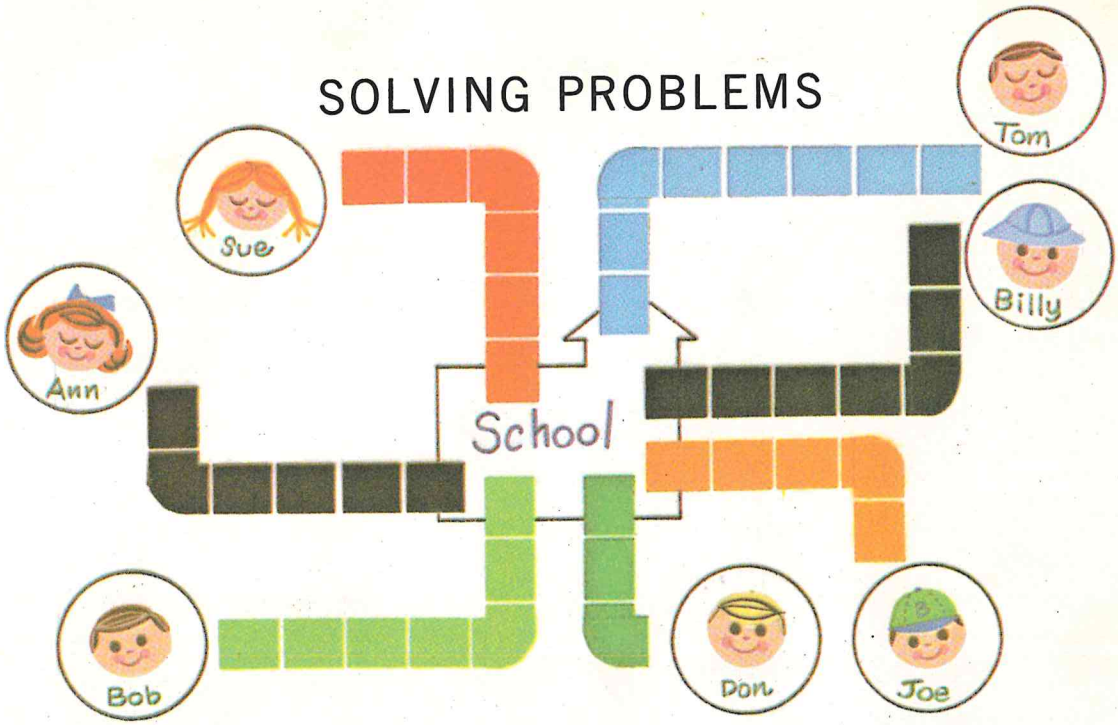
3. 2 fives = ▢ twos
   2 fours = ▢ twos
   3 sixes = ▢ twos
   4 threes = ▢ fours

4. Count by 2's to 30.
   Count by 5's to 50.

5. ▢ fives = 15
   ▢ threes = 12
   ▢ fours = 12
   ▢ sixes = 18
   ▢ nines = 18
   ▢ threes = 15
   ▢ twos = 10
   ▢ fours = 16



SOLVING PROBLEMS



1. Joe walks 5 blocks to school.
   Tom walks 8 blocks to school.
   How many are 8 blocks and 5 blocks?

2. How far does Bob walk? Sue?
   Who walks more blocks? How many more?

3. Billy walks 7 blocks to school and
   7 blocks back. How many are 7 and 7?

4. Does Bob walk more blocks than Joe?
   How many more?

5. Who lives nearest? How far does he walk?

PRACTICE

Write the missing numerals.

1.

$7 + \square = 11$	$8 + \square = 13$	$5 + 6 = \square$
$7 + \square = 12$	$8 + \square = 14$	$6 + 6 = \square$
$7 + \square = 13$	$8 + \square = 15$	$7 + 6 = \square$

2.

$15 - 9 = \square$	$13 - \square = 7$	$11 - 8 = \square$
$16 - 9 = \square$	$14 - \square = 7$	$12 - 8 = \square$
$17 - 9 = \square$	$15 - \square = 7$	$13 - 8 = \square$

3.

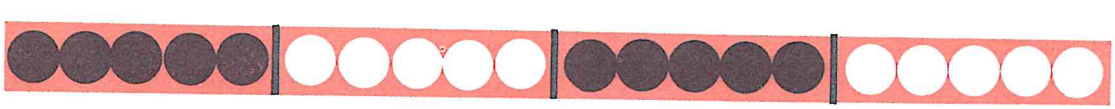
$3 + 8 = \square + 10$	$4 + 8 = \square + 10$
$9 + 4 = 10 + \square$	$9 + 7 = 10 + \square$
$2 + 9 = \square + 10$	$5 + 9 = \square + 10$

4.

$18 - 8 = \square$	$12 - \square = 6$	$\square - 9 = 2$
$16 - 8 = \square$	$12 - \square = 8$	$\square - 9 = 3$
$14 - 8 = \square$	$12 - \square = 10$	$\square - 9 = 4$

5.

$12 - 3 = \square$	$6 + 7 = \square$	$17 - 8 = \square$
$13 - 5 = \square$	$7 + 8 = \square$	$15 - 7 = \square$
$14 - 7 = \square$	$8 + 9 = \square$	$13 - 6 = \square$

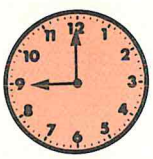


DO YOU REMEMBER?

1. 8 twos = ■ 2 nines = ■ 4 fours = ■
5 threes = ■ 2 eights = ■ 2 sixes = ■
4 threes = ■ 2 sevens = ■ 3 fives = ■

2. ■ sixes = 18 ■ fives = 15 ■ nines = 18
■ fours = 12 ■ threes = 18 ■ fives = 10
■ twos = 14 ■ twos = 16 ■ sevens = 14

3. What time does each clock show?



4. 10 + 2 = ■ 10 + 7 = ■ 10 + 6 = ■
10 + 4 = ■ 10 + 3 = ■ 10 + 9 = ■

5. 15 − 5 = ■ 17 − 7 = ■ 16 − 6 = ■
14 − 10 = ■ 12 − 10 = ■ 13 − 10 = ■

6. 7 + 4 = ■ 8 + 6 = ■ 9 + 7 = ■
3 + 9 = ■ 9 + 8 = ■ 8 + 7 = ■
7 + 5 = ■ 5 + 9 = ■ 8 + 5 = ■

7. 16 − 9 = ■ 11 − 8 = ■ 13 − 5 = ■
14 − 7 = ■ 17 − 8 = ■ 12 − 4 = ■
18 − 9 = ■ 15 − 8 = ■ 13 − 6 = ■

DO YOU KNOW?

1.	$3 + 4 = \square$	$5 + 1 = \square$	$4 + 6 = \square$	$5 + 3 = \square$	$2 + 7 = \square$	$3 + 3 = \square$	$1 + 9 = \square$
2.	$4 + 5 = \square$	$2 + 4 = \square$	$6 + 1 = \square$	$3 + 7 = \square$	$5 + 2 = \square$	$1 + 8 = \square$	$2 + 6 = \square$
3.	$7 + 1 = \square$	$6 + 4 = \square$	$3 + 5 = \square$	$1 + 5 = \square$	$2 + 8 = \square$	$4 + 2 = \square$	$5 + 4 = \square$
4.	$9 - 2 = \square$	$7 - 4 = \square$	$8 - 1 = \square$	$10 - 6 = \square$	$8 - 5 = \square$	$7 - 2 = \square$	$10 - 9 = \square$
5.	$8 - 7 = \square$	$6 - 3 = \square$	$10 - 4 = \square$	$9 - 5 = \square$	$8 - 2 = \square$	$10 - 8 = \square$	$6 - 1 = \square$
6.	$2 + \square = 10$	$9 - 9 = \square$	$\square + 3 = 9$	$8 - \square = 5$	$4 + \square = 7$	$10 - 10 = \square$	$9 - \square = 4$

DO YOU KNOW?

1.

8	10	6	9	6	9	7
−4	− 7	−5	−4	−2	−1	−5
■	■	■	■	■	■	■

2.

10	8	9	7	6	10	9
− 2	−6	−3	−1	−4	− 3	−8
■	■	■	■	■	■	■

3.

8	10	7	9	7	10	9
−3	− 1	−3	−7	−6	− 5	−6
■	■	■	■	■	■	■

4.

6	9	4	3	5	1	7
+2	+1	+3	+6	+5	+6	+2
■	■	■	■	■	■	■

5.

2	8	7	4	8	6	1
+5	+1	+3	+4	+2	+3	+7
■	■	■	■	■	■	■

6.

6	10	7	4	6	■	8
+ ■	− ■	− ■	+ ■	−6	+7	−8
8	3	2	10	■	9	■

ENRICHMENT

1. Write these numerals on your paper.

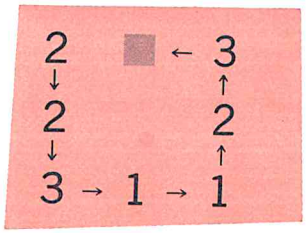
12 14 15

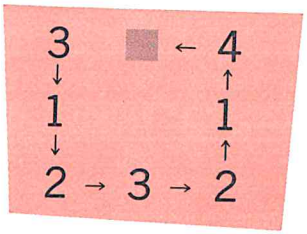
In the list below find all the names for 12, for 14, for 15. Write the letter for each name under the numerals.

a. 2 sixes + 2
b. 3 fours
c. 3 threes + 6
d. (17 − 2) − 3
e. 2 sevens + 2 − 2
f. (8 + 4) + (5 − 2)
g. (9 − 3) + 6
h. 2 sevens
i. 5 twos + 4
j. 3 fives
k. 2 threes + 3 twos
l. 2 sixes + 1 three
m. (12 − 5) + 7
n. 3 + 4 + (1 five)
o. (10 − 5) + (5 twos)
p. 9 + 1 + 1 + 1
q. 18 − 3
r. 20 − (2 + 2 + 2)

2. Write four different names for 11.
   Write four different names for 13.

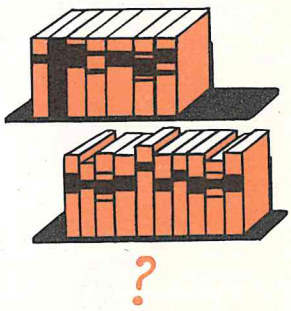
3. Follow the arrows and add.





ENRICHMENT

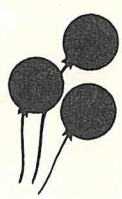
1. Joe has 8 picture cards.
   He wants to keep 3 or 4.
   How many can he give away?



2. The first shelf has 7 books on it.
   The second shelf has 10 books.
   A third shelf has more than 7 and fewer than 10 books.
   How many books could be on this shelf?

3. Ann has 15¢.
   A doll hat costs 5¢.
   Doll dresses cost 5¢ each.
   A doll coat costs 10¢.
   Tell what Ann can buy for 15¢.

4. Tom put two nickels and two cents in his bank. He took out five cents for ice cream. How much is left in his bank?



5. A balloon costs 1¢ and a top costs 3¢.
   Can Tom buy 2 tops and 2 balloons with the money left in Exercise 4?

DO YOU KNOW?

1. Write the numerals.

seven	one	eight	ten	five
two	four	three	six	nine

2. 4 tens + 7 ones = ■ 9 tens + 5 ones = ■

6 tens + 2 ones = ■ 10 tens = ■

3 tens + 3 ones = ■ 2 tens + 4 ones = ■

3. What number comes just after:

9? 16? 44? 97? 36? 11?

What number comes just before:

7? 13? 51? 75? 100? 82?

4. Find the answers.

4	2	5	4	3	2	3
3	1	2	2	5	5	3
2	3	3	2	2	3	3
■	■	■	■	■	■	■

5. Write the missing numerals.

5	___	15	20	___	___	35	___	___	___
72	74	___	___	___	82	___	___	88	___
10	20	___	40	___	___	70	___	90	___

DO YOU KNOW?

1. Find the answers.

1 dime = ■ pennies
1 dime = ■ nickels
5¢ + 4¢ + 1¢ = ■¢
5¢ + 5¢ + 5¢ = ■¢

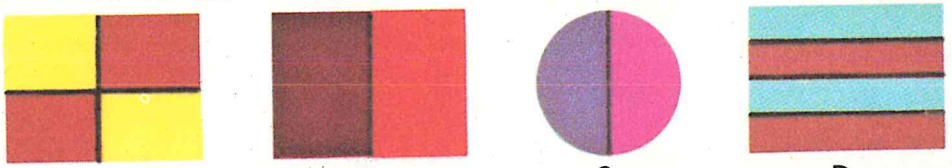
1 nickel = ■ pennies
3 nickels = ■ pennies
2¢ + 3¢ + 3¢ = ■¢
1¢ + 3¢ + 6¢ = ■¢

2. 12 = 10 + ■
15 = 10 + ■
18 = 10 + ■

14 = 10 + ■
17 = 10 + ■
16 = 10 + ■

19 = 10 + ■
13 = 10 + ■
11 = 10 + ■

3.



A B C D

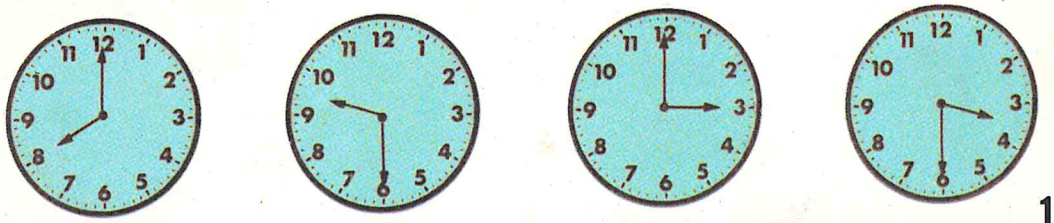
Which pictures show fourths?
Which pictures show 2 equal parts?
What is each part called?

4.

88 = ■ tens + ▲ ones
16 = ■ ten + ▲ ones
54 = ■ tens + ▲ ones

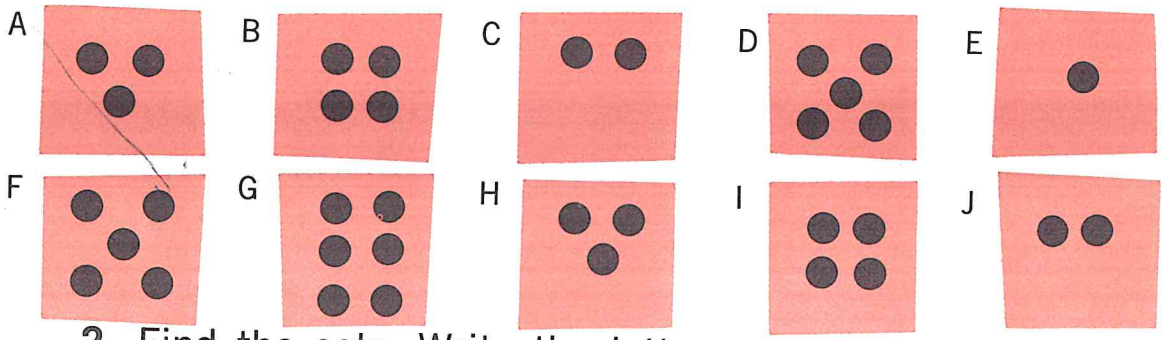
79 = ■ tens + ▲ ones
41 = ■ tens + ▲ one
10 = ■ ten + ▲ ones

5. What time is shown on each clock?



PRACTICE EXERCISES

1. Which sets match? Write the letters.



2. Find the sets. Write the letters.
   a. Two sets that have 6 when put together.
   b. Two sets that have 7.
   c. Two sets that have 8.
   d. Two sets that have 5.
   e. Two sets that have 4.

3. Find these sets. Write the letters.
   a. A set that has 2 more than another set.
   b. A set that has 2 less than another set.
   c. A set that has 1 more than another set.
   d. A set that has 1 less than another set.
   e. Three sets that have 6 altogether.
   f. Three sets that have 7.
   g. Three sets that have 8.

PRACTICE EXERCISES

1. Write the missing numerals. Make the sentences true.

$4 - \square = 1$	$6 - \square = 2$	$6 - 3 = \square$
$6 - \square = 1$	$3 - \square = 2$	$6 - 4 = \square$
$5 - \square = 1$	$7 - \square = 2$	$6 - 2 = \square$
$7 - \square = 1$	$5 - \square = 2$	$6 - 1 = \square$

2. Write the missing numerals. Make the sentences true.

$4 - 1 = \square$	$7 = 4 + \square$	$6 = 5 + \square$
$5 - 2 = \square$	$7 = 3 + \square$	$6 = 4 + \square$
$6 - 3 = \square$	$7 = 2 + \square$	$6 = 3 + \square$
$7 - 4 = \square$	$7 = 1 + \square$	$6 = 2 + \square$

In each pair of sentences, put the same numeral in the two boxes to make both sentences true.

3. $1 + 4 = \square$ ↓ $\square - 4 = 1$ $\quad$ $1 + 3 = \square$ ↓ $\square - 3 = 1$

4. $5 + 2 = \square$ ↓ $\square - 2 = 5$ $\quad$ $4 + 1 = \square$ ↓ $\square - 1 = 4$

5. $1 + 5 = \square$ ↓ $\square - 5 = 1$ $\quad$ $6 + 1 = \square$ ↓ $\square - 1 = 6$

6. $2 + 2 = \square$ ↓ $\square - 2 = 2$ $\quad$ $1 + 2 = \square$ ↓ $\square - 2 = 1$

PRACTICE EXERCISES

Write each number sentence. In each exercise, if the frames are alike, use the same numeral.

1.

$7 - \square = 1$

$\square - 1 = \triangle$

$\triangle - 1 = \hexagon$

$\hexagon - 1 = 3$

2.

$3 + 4 = \square$

$\square - 3 = \triangle$

$\triangle + 2 = \diamond$

$\diamond - 2 = 4$

3.

$2 + \square = 4$

$\square + 3 = \triangle$

$\triangle + 2 = \hexagon$

$\hexagon - 2 = 5$

4.

$7 - 1 = \square$

$\square - 3 = \triangle$

$\triangle + 4 = \diamond$

$\diamond - 4 = 3$

5.

$8 - 6 = \square$

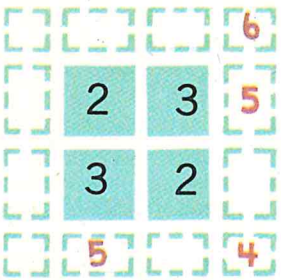
$\square + 6 = 8$

$8 - \square = 4$

$\square + \square = 8$

PRACTICE EXERCISES

1. Add the numbers down, up, and across.
Write the answers.



4	3
2	4

2	1
3	5

2. Write the missing numerals. Make the sentences true.

$3 + 5 = \square$	$7 - 2 = \square$	$8 - \square = 3$
$2 + 6 = \square$	$6 - 2 = \square$	$7 - \square = 2$
$1 + 7 = \square$	$5 - 2 = \square$	$6 - \square = 1$

3. Find the answers.

a.

8	6	7	5	8	4
-3	-4	-6	-3	-6	-2
$\square$	$\square$	$\square$	$\square$	$\square$	$\square$

b.

7	6	8	7	8	8
-4	-3	-2	-3	-4	-7
$\square$	$\square$	$\square$	$\square$	$\square$	$\square$

4. $5 - 1 = \square$ $6 - 1 = \square$ $7 - 1 = \square$

PRACTICE EXERCISES

In each pair of sentences, put the same numeral in both boxes. Make the sentences true.

1. $6 + \square = 8$
$\square + 6 = 8$

$2 + \square = 7$
$\square + 2 = 7$

2. $4 + \square = 6$
$\square + 4 = 6$

$3 + \square = 8$
$\square + 3 = 8$

3. $6 - \square = 3$
$\square - 2 = 1$

$8 - \square = 4$
$\square - 1 = 3$

4. $6 - \square = 1$
$\square - 3 = 2$

$7 - \square = 2$
$\square - 4 = 1$

5. $4 + \square = 8$
$\square + 4 = 8$

$8 - \square = 5$
$\square + 3 = 6$

6. $8 - \square = 2$
$\square - 2 = 4$

$7 - \square = 3$
$\square - 3 = 1$

7. $8 - \square = 6$
$\square + 2 = 4$

$8 - \square = 3$
$\square + 2 = 7$

PRACTICE EXERCISES

1. Add 1 to each number.

4 2 1 3 5 7 6

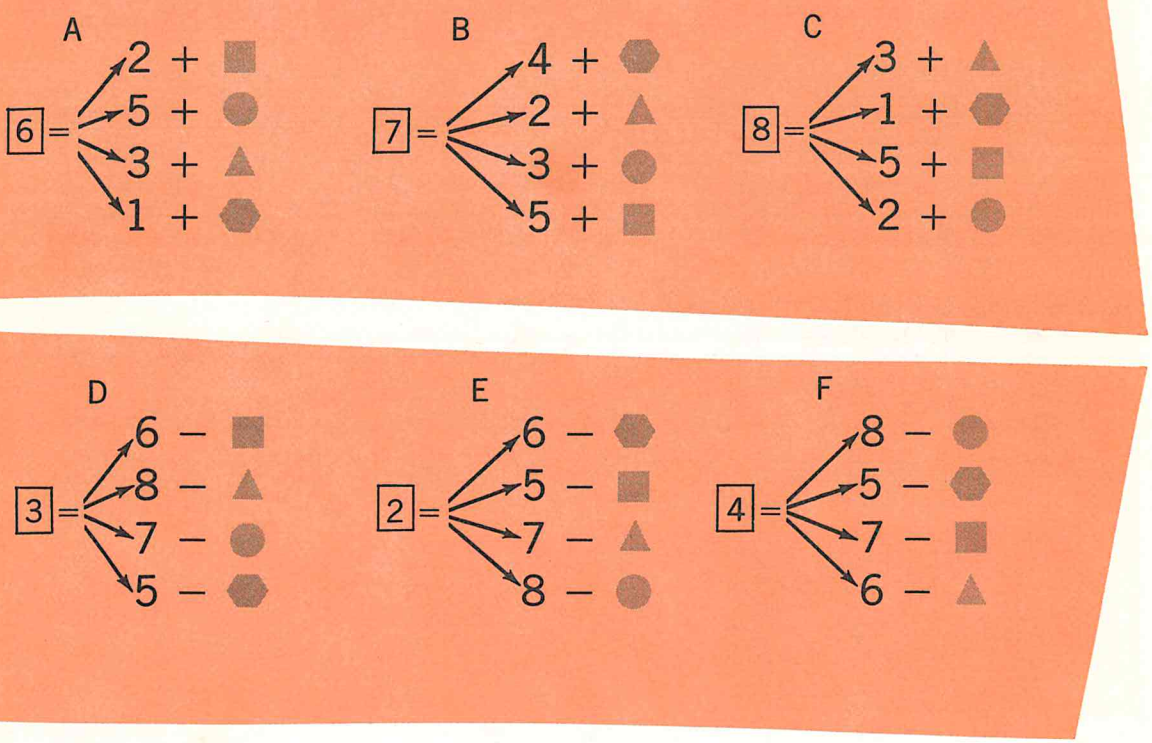
Now add 2 to each number above.

2. Subtract 1 from each number.

6 3 4 7 5 8 9

Now subtract 2 from each number above.

3. Find the missing numbers.



PRACTICE EXERCISES

Write the answers. Look for patterns.

1.

$1+2+3=$ ●	$3+4+2=$ ●	$1+2+5=$ ●
$2+2+2=$ ●	$3+2+4=$ ●	$2+5+1=$ ●
$2+3+1=$ ●	$2+4+3=$ ●	$1+5+2=$ ●

2.

$5+2=4+$ ●	$1+8=2+$ ●
$3+6=4+$ ●	$6+1=5+$ ●
$1+4=3+$ ●	$5+3=$ ● $+2$
$9-2=8-$ ●	$9-6=8-$ ●
$9-3=8-$ ●	$9-4=8-$ ●

3.

$8-$ ● $=4$	$9-$ ● $=2$	$5-$ ● $=2$
$6-$ ● $=3$	$8-$ ● $=2$	$7-$ ● $=3$
$4-$ ● $=2$	$7-$ ● $=2$	$9-$ ● $=4$

4.

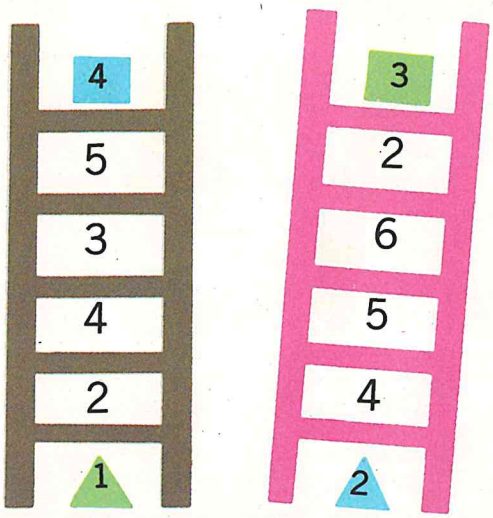
$4+4=$ ●	$1+6=$ ●	$9-8=$ ●
$4+3=$ ●	$2+6=$ ●	$8-7=$ ●
$4+5=$ ●	$3+6=$ ●	$7-6=$ ●

5.

$5-2=$ ●	$9-$ ● $=8$	$5-$ ● $=2$
$7-4=$ ●	$7-$ ● $=6$	$6-$ ● $=4$
$9-6=$ ●	$5-$ ● $=4$	$7-$ ● $=6$

PRACTICE EXERCISES

1.



Add the number at the top to each number on the ladder.
Write the number sentence.

Add the number at the bottom to each number on the ladder.
Write the number sentence.

2.

7	6	5	8	5	7
+1	+2	+1	+1	+3	+2
■	■	■	■	■	■

3.

9	9	8	9	8	9
−7	−8	−2	−6	−3	−5
■	■	■	■	■	■

4.

6	4	5	5	2	3
+3	+1	+4	+2	+7	+3
■	■	■	■	■	■

5.

9	7	9	6	9	9
−1	−2	−4	−1	−2	−3
■	■	■	■	■	■

PRACTICE EXERCISES

1. Write the answers. Look for patterns.

$10 - \square = 1$	$2 + \square = 7$	$10 - \square = 4$
$9 - \square = 1$	$2 + \square = 8$	$9 - \square = 3$
$8 - \square = 1$	$2 + \square = 9$	$8 - \square = 2$
$7 - \square = 1$	$2 + \square = 10$	$7 - \square = 1$

2.

4	9	3	8	5	6
+6	−3	+3	−1	+2	−4
☐	☐	☐	☐	☐	☐

3.

9	7	9	5	8	7
−5	+3	−7	+3	−4	+2
☐	☐	☐	☐	☐	☐

4.

6	10	5	7	4	10
+3	− 2	+1	−2	+3	− 7
☐	☐	☐	☐	☐	☐

5.

7	5	6	10	1	9
−5	+4	−1	− 4	+8	−2
☐	☐	☐	☐	☐	☐

6. Write the missing numerals. Make the sentences true.

$6 + 4 = 4 + \square$	$10 - 4 = 9 - \square$
$2 + 7 = 7 + \square$	$9 - 3 = 8 - \square$

PRACTICE EXERCISES

1. Write the answers. Look for patterns.

$4 + 2 =$ ⬢	$6 - 3 =$ ⬢	$7 +$ ⬢ $= 8$
$6 + 2 =$ ⬢	$8 - 3 =$ ⬢	$8 +$ ⬢ $= 9$
$8 + 2 =$ ⬢	$10 - 3 =$ ⬢	$9 +$ ⬢ $= 10$

2.

6	9	1	10	4	7
+4	−1	+6	− 5	+4	−3
■	■	■	■	■	■

3.

1	8	3	6	3	8
+9	−2	+4	−2	+6	−5
■	■	■	■	■	■

4.

7	4	3	10	1	6
−4	+5	+7	− 1	+5	+1
■	■	■	■	■	■

5.

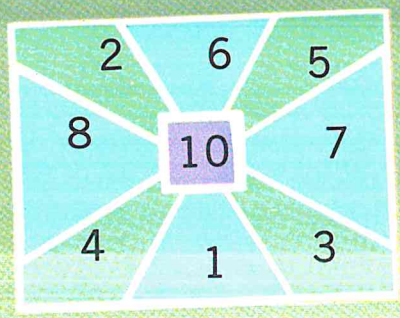
9	3	2	5	1	10
−4	+5	+4	+5	+7	− 8
■	■	■	■	■	■

6. Write the missing numerals. Make the sentences true.

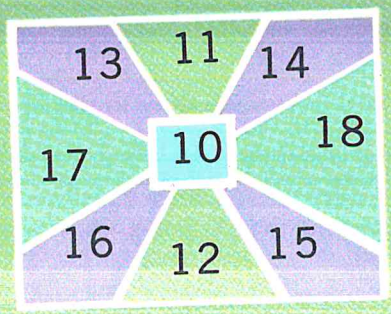
$6 - 3 = 7 -$ ■	$4 + 4 = 9 -$ ■
$10 - 5 = 5 -$ ■	$4 + 2 = 8 -$ ■

PRACTICE EXERCISES

1. Add the 10 to each of the other numbers.



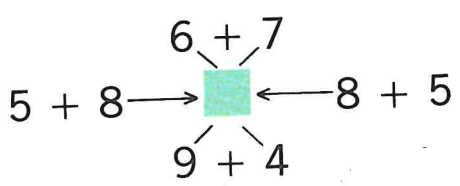
2. Subtract the 10 from each of the other numbers.

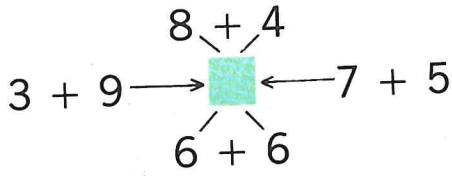


3.

11 − 9 = ▢	13 − 8 = ▢	12 − 4 = ▢
13 − 5 = ▢	12 − 6 = ▢	11 − 6 = ▢
12 − 9 = ▢	13 − 7 = ▢	12 − 7 = ▢
13 − 4 = ▢	11 − 7 = ▢	13 − 9 = ▢

4. What numeral goes in each box?





5.

7 + 4 = ▢	6 + 5 = ▢	8 + 3 = ▢
11 − 5 = ▢	11 − 3 = ▢	11 − 4 = ▢

INDEX

Addition
  adding to ten, 106, 110, 111, 140, 142, 143; adding to tens, 110, 111; adding ten, 141–143
  applied to money, 93, 128
  column, 96, 97, 128; horizontal, 51, 52, 76, 77
  facts, see facts, numbers
  meaning of, 16, 18, 35, 38, 51, 54, 71, 74, 76, 77, 85, 86, 88, 96, 125, 140
  relationship to multiplication, 52, 60; to subtraction, 35, 71, 90, 98, 125, 131, 140, 142
  sign for, 54, 59
  vertical form, 88, 90
Additive subtraction, see missing addends
Arrays, 52, 73
Associative property of addition, 51, 76, 77, 96, 97

Cent(s), sign for, 92; understanding, 92, 93, 124, 126–129
Commutative property of addition, 16, 18, 35, 54, 55, 60, 71, 74, 85, 125, 130, 140 142, 143; of multiplication, 52, 73, 148
Comparisons, 3, 17, 21, 25, 33, 45, 48, 94, 126
Counting by 1's, 2, 4, 14, 20, 29, 60, 99, 109, 123; by 2's, 20, 52, 73, 99, 109, 116, 123, 130, 145, 148, 150; by 3's, 52, 73, 99; by 4's, 52, 73, 99; by 5's, 99, 109, 116, 117, 122, 123, 146, 150; by 10's, 103, 108, 116, 123

Dime, 92, 93, 95, 124–126
Division facts, see facts, number
Doubles, near doubles, 38, 39, 60, 91, 133, 144

Enrichment pages, 43, 63, 82, 102, 121, 139, 156, 157

Facts, mastery tests (Do You Know?), 83, 138, 154, 155
Facts, number
  addition and subtraction, sums and minuends two-six, chap. 2, 16, 18, 19; three-seven, chap. 3, 28, 32, 35, 38, 39, 41; four-eight, chap. 4, 45, 48, 49, 54–57, 59, 60; five-nine, chap. 5, 65, 68, 70, 71, 74, 75; four-nine, chap. 6, 85–91, 93, 98; five-nine, chap. 7, 107, 112, 113, 118; six-ten, chap. 8, 125, 126, 128, 130, 131, 133; eleven-eighteen, chap. 9, 140–144, 149
  multiplication and division, twos-fours, 52, 60, 73, 112, 113, 127, 129, 148; fives, 127, 129, 148; sixes-nines, 148
Facts, using relationships, 38, 39, 48, 49, 60, 91, 98, 107, 132, 133, 140–145
Fourth(s), 115
Fractions, 114, 115
Frames, 32, 33, 35, 38, 39, 48, 49, 52, 54, 56, 59, 60, 70, 71, 73–77, 80, 85–91, 93–98, 103–113, 118, 122–135, 140–145, 148–150

Generalizations, 60, 133

Half (halves), 114, 115
Half hour(s), 146
Hand symbols, for five, 95, 98, 103, 105, 106, 110; for ten, 95, 103–106, 110
Hour(s), 117, 146
Hundred, understanding, 103, 104, 123

Inverse operations, addition and subtraction, 35, 71, 90, 98, 125, 131, 140, 142

Measures, 78
Minute(s), 146
Missing addends, 5, 8, 9, 17, 20, 32, 49, 70, 84, 118, 126, 130
Money, coins, 92, 93, 95, 122–126; comparing, 92, 93, 126; counting, 122, 123; related to operations, addition, 93, 126, 128; division, 127, 129; multiplication, 127, 129; subtraction, 93, 126; values, 92, 93, 95, 124, 126
Multiplication, see facts, number

Nickel, 92, 93, 126
Number(s)
  comparing, 25, 33, 48, 94, 106, 111, 129
  even and odd, 130
  ordinal use, 2, 8, 12, 14, 20, 29, 31, 46, 69, 103
  sentences, 32, 33, 35, 37–39, 48, 49, 52 58–60, 68, 70, 71, 73–77, 80, 86–89, 93, 94, 107, 112, 113, 125–127, 129, 130, 140–144, 147–150

Number(s) (*Continued*)
sequence, 4, 6–8, 15, 20, 33, 34, 35, 47, 50, 60, 66, 67, 84, 95, 99, 103–106, 109, 110, 123, 135
rational, 114, 115
understanding, one hundred, 103, 104, 123; tens, 103, 104, 122, 123, 135; tens and ones, 105, 106, 108–111, 122, 123, 135
Number system, 95, 103–106, 108, 110, 111, 122, 123, 135
Number words, 7, 50, 67, 95
Numerals, reading, 4, 6, 7, 15, 30, 33, 34, 45, 47, 66, 67, 84, 95, 103–105, 108, 109, 122, 123, 134, 135; writing, 6, 7, 15, 34, 47, 67, 95, 99, 104, 106, 109–111, 116, 124, 134, 135, 145
Numeration system, 95, 103, 104, 106, 108–111, 124, 134, 135, (see counting, number words, numerals, place value)

One-to-one correspondence, 2, 14, 17, 21, 29, 33, 61, 68, 84, 112, 113, 118
Open sentences, 32, 33, 35, 48, 52, 59, 60, 70, 71, 73–75, 86, 87, 94, 107, 125, 127, 129, 130, 140–144, 148–150
Operations, see addition and subtraction
Ordinals, 2, 8, 12, 14, 20, 29, 31, 46, 69, 103

Penny(ies), 92, 93, 95, 122–126
Place holders, 95, 104, 106, 109, 111, 124, 134, 135, (see also frames)
Place value, 95, 104, 106, 109, 111, 124, 134, 135
Practice pages, 11, 23, 25, 27, 40, 41, 44, 61, 64, 79, 90, 101, 120, 132, 134, 149, 152, 160–170
Problems, analysis (sequence pictures), 10, 24, 36, 37, 58; continuous story, 12, 22, 41, 53, 80, 112, 113; originating, 41, 53, 55, 57, 68, 72, 80, 112, 113; reading, 147, 150, 151

Rational numbers, 114, 115
Relationships, see facts, using relationships
Reviews (Do You Remember?), 26, 42, 62, 81, 100, 119, 136, 137, 153

Sets, combine, 8, 10, 12, 13, 16, 18, 25, 28, 35, 38, 45, 51, 54, 55, 65, 71, 74, 76, 77, 85, 125, 131, 140–142, 144; compare, 3, 8, 17, 21, 30, 33, 45, 48, 66, 94, 126; complete, 5, 8, 9, 17, 20, 32, 49, 70, 84, 118; same number of objects in, 52, 60, 73, 148; explore, 1–5, 13, 14, 16, 28–30, 45, 46, 48, 65, 66, 84, 94, 95, 103, 108, 122, 123, 125, 130, 140–142; recognize, 1–7, 13–15, 28–31, 34, 45–48, 50, 60, 65–67, 84, 94, 95, 103, 108, 111, 122, 123, 125, 130, 140–142, 144; separate, 8–10, 12, 13, 16, 19, 28, 35, 39, 45, 56, 57, 65, 71, 75, 85, 125, 131, 140–142, 144
Subsets, using, 1–3, 5, 13, 14, 16, 28, 29, 33, 38, 39, 45, 46, 48, 49, 52, 65, 74, 75, 84–86, 94, 95, 98, 103, 107, 118, 125, 130, 140–142
Subtraction
applied to money, 93
facts, see facts, number
meaning of, 8, 16, 19, 35, 39, 56, 71, 75, 85, 87, 89, 125, 126, 140, 142
relationship to addition, 35, 71, 90, 98, 125, 131, 140, 142; to division, 52
remainder concept, 8, 19, 35, 39, 56, 71, 75, 87, 89, 125, 133, 140
sign for, 56, 59
subtracting ten, 141, 143; to get ten, 140, 142
vertical form, 89, 90
Subtraction facts, see facts, number
Symbols, for five, 95, 98, 103, 105, 106 110, for ten, 95, 103–106, 110; cent, 92; equality, 59; plus, 54; minus, 56

"Teen" numbers, 105, 106, 140–143
Ten(s), adding, 141–143; adding to get ten, 140; adding to, 106, 110, 111, 140, 142, 143; subtracting, 141, 143; subtracting to get ten, 140, 142; understanding, 84, 94, 95, 103, 104, 122, 123, 135; and ones, 105, 106, 108–111, 122, 123, 135
Tests (Do You Know?), end of chapter (see reviews); end of term, 158, 159; mastery of facts, 83, 138, 154, 155
Time, 117, 146

Variables, see open sentences

Zero, 95, 103–105, 122–124, 126

THE MODERN MATHEMATICS SERIES